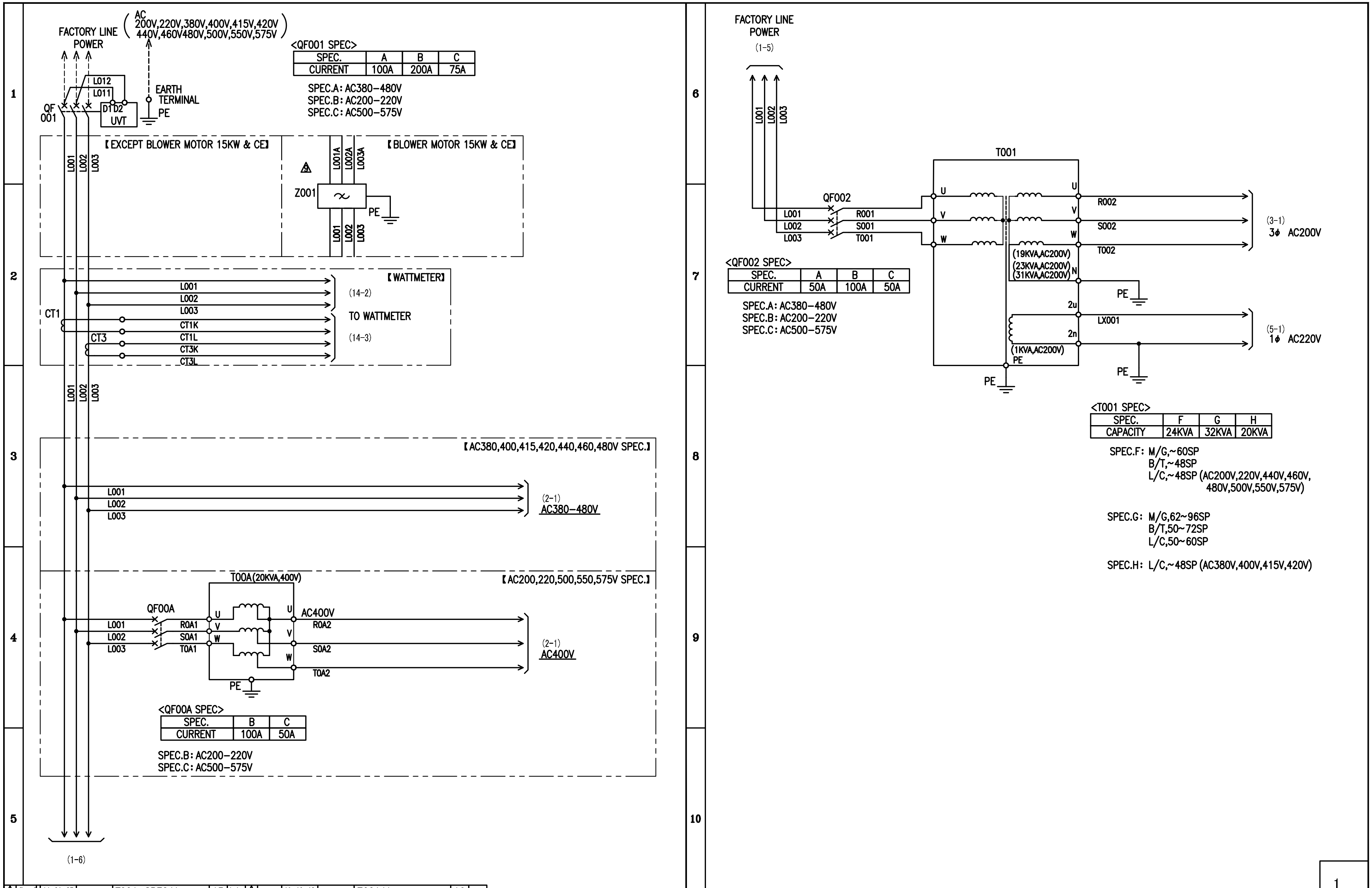
# Electrical Drawing List

**SERIAL No.** **20SX315710:001**
**TYPE** **QPRO EX**
**Title** **MAIN**

| Drawing Name | Drawing No. |
|---|---|
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-16 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-27 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-34 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-41 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-56 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-65 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA03B-74 |
| SEQUENCE DIAGRAM (COMMUNICATION LINE) | 9CA-QA01B-82 |
| SEQUENCE DIAGRAM (COMMUNICATION LINE) | 9CA-QA01B-92 |
| SEQUENCE DIAGRAM (COMMUNICATION LINE) | 9CA-QA01B-A3 |
| SEQUENCE DIAGRAM (COMMUNICATION LINE) | 9CA-QA01B-B3 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA03B-C1 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-D4 |
| SEQUENCE DIAGRAM (MAIN CIRCUIT) | 9CA-QA01B-P0 |
| SEQUENCE DIAGRAM (UNIT DUCT(DC280V LINE)) | 9CA-QA01B-E2 |
| SEQUENCE DIAGRAM (UNIT DUCT(COM, LINE)) | 9CA-QA01B-F3 |
| SEQUENCE DIAGRAM (UNIT DUCT(PCB POWER)) | 9CA-QA01B-G4 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER INPUT) | 9CA-QA01B-H3 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER INPUT) | 9CA-QA01B-J5 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER INPUT) | 9CA-QA01B-K1 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER OUTPUT) | 9CA-QA01B-L1 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER OUTPUT) | 9CA-QA01B-M3 |
| SEQUENCE DIAGRAM (SPAN CONTROLLER OUTPUT) | 9CA-QA01B-N3 |
| CONSTRUCTION DIAGRAM□□(MAIN CONTROL BOX) | 9CA-QA01C-1F |
| SETTING DIAGRAM (RETURN C/V INV. ,PACKAGE C/V INV.) | 9CA-QA01E-11 |


1
2
3
4
5
6
7
8
9
10
FACTORY LINE POWER
AC (200V,220V,380V,400V,415V,420V 440V,460V480V,500V,550V,575V)
L012
L011
QF 001
D1 D2
UVT
EARTH TERMINAL
PE
【EXCEPT BLOWER MOTOR 15KW & CE】
【BLOWER MOTOR 15KW & CE】
L001
L002
L003
L001A
L002A
L003A
Z001
PE
【WATTMETER】
CT1
CT3
CT1K
CT1L
CT3K
CT3L
(14-2)
TO WATTMETER
(14-3)
【AC380,400,415,420,440,460,480V SPEC.】
(2-1)
AC380-480V
【AC200,220,500,550,575V SPEC.】
T00A(20KVA,400V)
QF00A
R0A1
S0A1
T0A1
U
V
W
AC400V
R0A2
S0A2
T0A2
(2-1)
AC400V
PE
(1-6)
FACTORY LINE POWER
(1-5)
T001
QF002
L001
L002
L003
R001
S001
T001
R002
S002
T002
(3-1)
3ϕ AC200V
(19KVA,AC200V)
(23KVA,AC200V)
(31KVA,AC200V)
N
PE
2u
2n
LX001
(5-1)
1ϕ AC220V
(1KVA,AC200V)
PE

<QF001 SPEC>

| SPEC. | A | B | C |
|---|---|---|---|
| CURRENT | 100A | 200A | 75A |

SPEC.A: AC380-480V
SPEC.B: AC200-220V
SPEC.C: AC500-575V

<QF00A SPEC>

| SPEC. | B | C |
|---|---|---|
| CURRENT | 100A | 50A |

SPEC.B: AC200-220V
SPEC.C: AC500-575V

<QF002 SPEC>

| SPEC. | A | B | C |
|---|---|---|---|
| CURRENT | 50A | 100A | 50A |

SPEC.A: AC380-480V
SPEC.B: AC200-220V
SPEC.C: AC500-575V

<T001 SPEC>

| SPEC. | F | G | H |
|---|---|---|---|
| CAPACITY | 24KVA | 32KVA | 20KVA |

SPEC.F: M/G,~60SP
B/T,~48SP
L/C,~48SP (AC200V,220V,440V,460V, 480V,500V,550V,575V)

SPEC.G: M/G,62~96SP
B/T,50~72SP
L/C,50~60SP

SPEC.H: L/C,~48SP (AC380V,400V,415V,420V)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | a~d | 14-01-23 | | T001のSPEC追加 | 13 | 福沢 | 9 | ~ | 19-10-18 | | Z001追加 | 16 | 平野 |
| 4 | ~ | 13-07-18 | | Z001をOPTION化 | 12 | 福沢 | 8 | ~ | 19-02-22 | | 8スパン対応 | 15 | 平野 |
| 3 | a~b | 12-10-02 | | ホットスプライサー用回路削除,SPEC追加 | 11 | 福沢 | 7 | a~b | 18-10-23 | | 電力モニタ対応 | | |
| 2 | a~b | 12-09-05 | | SPEC追加,コメント追加 | 10 | 福沢 | | ~ | | | OPTION削除,ｼﾝﾎﾞﾙ置換え | 14 | 平野 |
| 1 | ~ | 12-02-10 | | 端子記号誤記修正 | 10 | 伊藤 | 6 | ~ | 15-06-26 | | T001のSPEC追加 | 13 | 福沢 |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019-10-18 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM (MAIN CIRCUIT) |
| 設計 DESIGNED | 2011-11-28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-16 609 |
| 製図 DRAWN | 2011-11-28 | M.YOSHIDA | サイズ SIZE | 2 | | |

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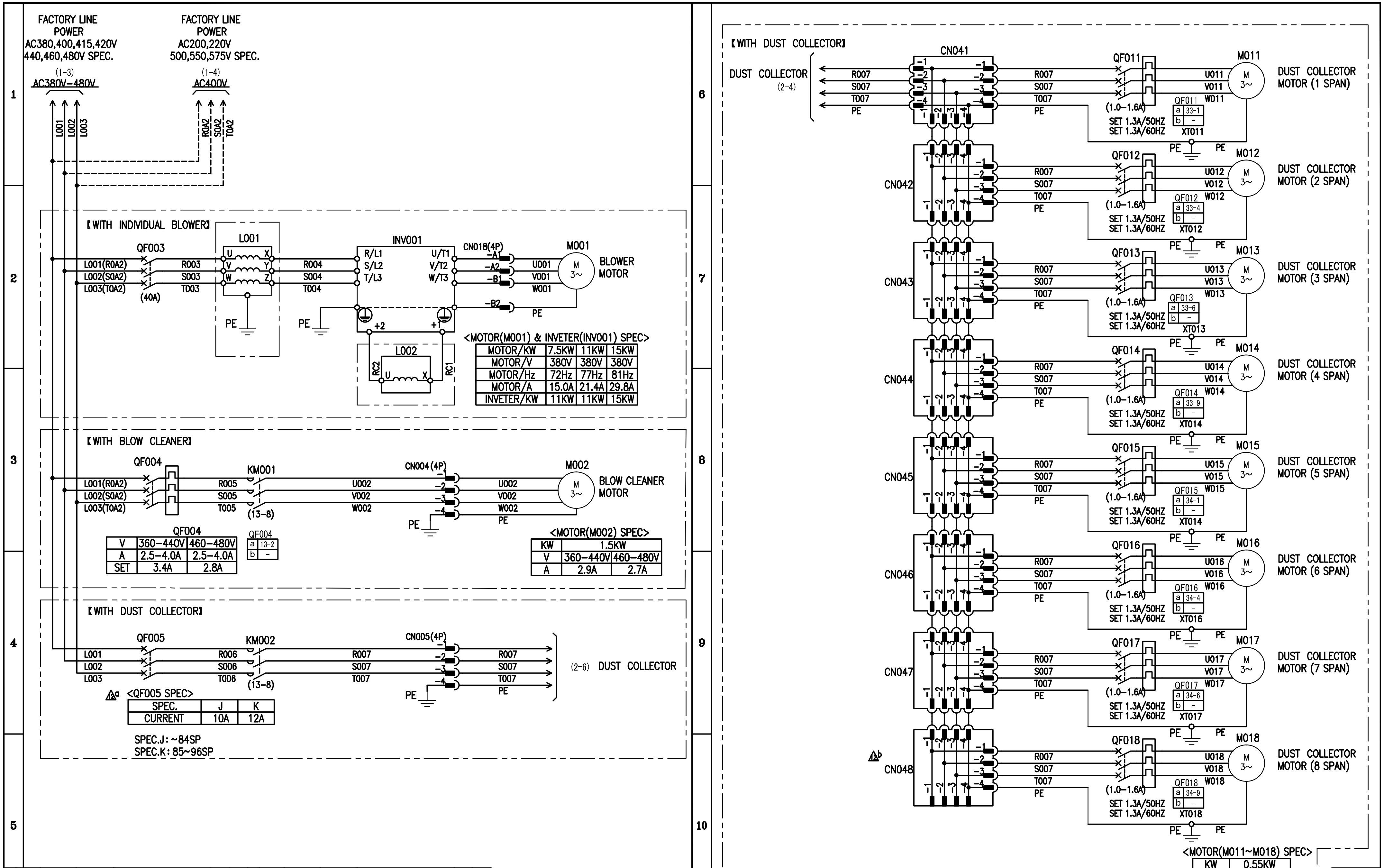
1
2
3
4
5
6
7
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9
10
FACTORY LINE POWER
AC380,400,415,420V
440,460,480V SPEC.
FACTORY LINE POWER
AC200,220V
500,550,575V SPEC.
(1-3)
AC380V-480V
(1-4)
AC400V
L001
L002
L003
R0A2
S0A2
T0A2
【WITH INDIVIDUAL BLOWER】
QF003
L001(R0A2)
L002(S0A2)
L003(T0A2)
(40A)
R003
S003
T003
L001
U
V
W
X
Y
Z
PE
R004
S004
T004
INV001
R/L1
S/L2
T/L3
U/T1
V/T2
W/T3
+2
+1
PE
L002
RC2
RC1
U
X
CN018(4P)
-A1
-A2
-B1
-B2
U001
V001
W001
PE
M001
M
3~
BLOWER MOTOR
【WITH BLOW CLEANER】
QF004
L001(R0A2)
L002(S0A2)
L003(T0A2)
R005
S005
T005
KM001
(13-8)
U002
V002
W002
CN004(4P)
-1
-2
-3
-4
U002
V002
W002
PE
PE
M002
M
3~
BLOW CLEANER MOTOR
【WITH DUST COLLECTOR】
QF005
L001
L002
L003
R006
S006
T006
KM002
(13-8)
R007
S007
T007
CN005(4P)
-1
-2
-3
-4
R007
S007
T007
PE
PE
(2-6) DUST COLLECTOR
【WITH DUST COLLECTOR】
DUST COLLECTOR
(2-4)
R007
S007
T007
PE
CN041
CN042
CN043
CN044
CN045
CN046
CN047
CN048
-1
-2
-3
-4
R007
S007
T007
PE
QF011
(1.0-1.6A)
SET 1.3A/50HZ
SET 1.3A/60HZ
U011
V011
W011
QF011 a 33-1 b -
XT011
PE
M011
M
3~
DUST COLLECTOR MOTOR (1 SPAN)
QF012
U012
V012
W012
QF012 a 33-4 b -
XT012
M012
DUST COLLECTOR MOTOR (2 SPAN)
QF013
U013
V013
W013
QF013 a 33-6 b -
XT013
M013
DUST COLLECTOR MOTOR (3 SPAN)
QF014
U014
V014
W014
QF014 a 33-9 b -
XT014
M014
DUST COLLECTOR MOTOR (4 SPAN)
QF015
U015
V015
W015
QF015 a 34-1 b -
XT014
M015
DUST COLLECTOR MOTOR (5 SPAN)
QF016
U016
V016
W016
QF016 a 34-4 b -
XT016
M016
DUST COLLECTOR MOTOR (6 SPAN)
QF017
U017
V017
W017
QF017 a 34-6 b -
XT017
M017
DUST COLLECTOR MOTOR (7 SPAN)
QF018
U018
V018
W018
QF018 a 34-9 b -
XT018
M018
DUST COLLECTOR MOTOR (8 SPAN)
12b

<MOTOR(M001) & INVETER(INV001) SPEC>

| | | | |
|---|---|---|---|
| MOTOR/KW | 7.5KW | 11KW | 15KW |
| MOTOR/V | 380V | 380V | 380V |
| MOTOR/Hz | 72Hz | 77Hz | 81Hz |
| MOTOR/A | 15.0A | 21.4A | 29.8A |
| INVETER/KW | 11KW | 11KW | 15KW |

QF004

| | | |
|---|---|---|
| V | 360-440V | 460-480V |
| A | 2.5-4.0A | 2.5-4.0A |
| SET | 3.4A | 2.8A |

QF004

| | |
|---|---|
| a | 13-2 |
| b | - |

<MOTOR(M002) SPEC>

| | | |
|---|---|---|
| KW | 1.5KW | |
| V | 360-440V | 460-480V |
| A | 2.9A | 2.7A |

12a <QF005 SPEC>

| SPEC. | J | K |
|---|---|---|
| CURRENT | 10A | 12A |

SPEC.J: ~84SP
SPEC.K: 85~96SP

<MOTOR(M011~M018) SPEC>

| | | |
|---|---|---|
| KW | 0.55KW | |
| Hz | 50Hz | 60Hz |
| A | 1.3A | 1.3A |

2

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | a ~ c | 15-05-08 | | 設定値変更,誤記修正 | 24 | 福沢 | | | | | | | |
| 6 | a ~ b | 14-11-08 | | SC001追加 | 23 | 福沢 | 12 | a ~ b | 19-05-08 | | 8スパン対応 | 27 | 平野 |
| 5 | a ~ b | 13-04-08 | | リアクトル区分変更 | 22 | 福沢 | 11 | a ~ b | 18-10-23 | | シンボル置換え,誤記修正 | 26 | 平野 |
| 4 | a ~ d | 12-12-11 | | モーターSPEC変更,誤記修正 | 22 | 福沢 | 10 | a ~ d | 15-10-27 | | SC001削除,QF004, | | |
| 3 | ~ | 12-07-23 | | 誤記修正 | 21 | 福沢 | | ~ | | | M002変更,誤記修正 | 26 | 春日 |
| 2 | a~p | 12-03-29 | | 電気記号変更 | 21 | 伊藤 | 9 | ~ | 15-07-16 | | 誤記修正 | 25 | 福沢 |
| 1 | ~ | 12-02-10 | | コネクタピン番号誤記訂正 | 20 | 伊藤 | 8 | ~ | 15-06-26 | | 7SPAN追加 | 25 | 福沢 |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |
| CHECKED | 2019-05-08 | K.KAWAMOTO | | | | |
| DESIGNED | 2011-11-28 | M.ITO | SCALE | | 図番 DRW.NO | 9CA-QA01B-27 |
| DRAWN | 2011-11-28 | M.YOSHIDA | SIZE | 2 | | 70C |

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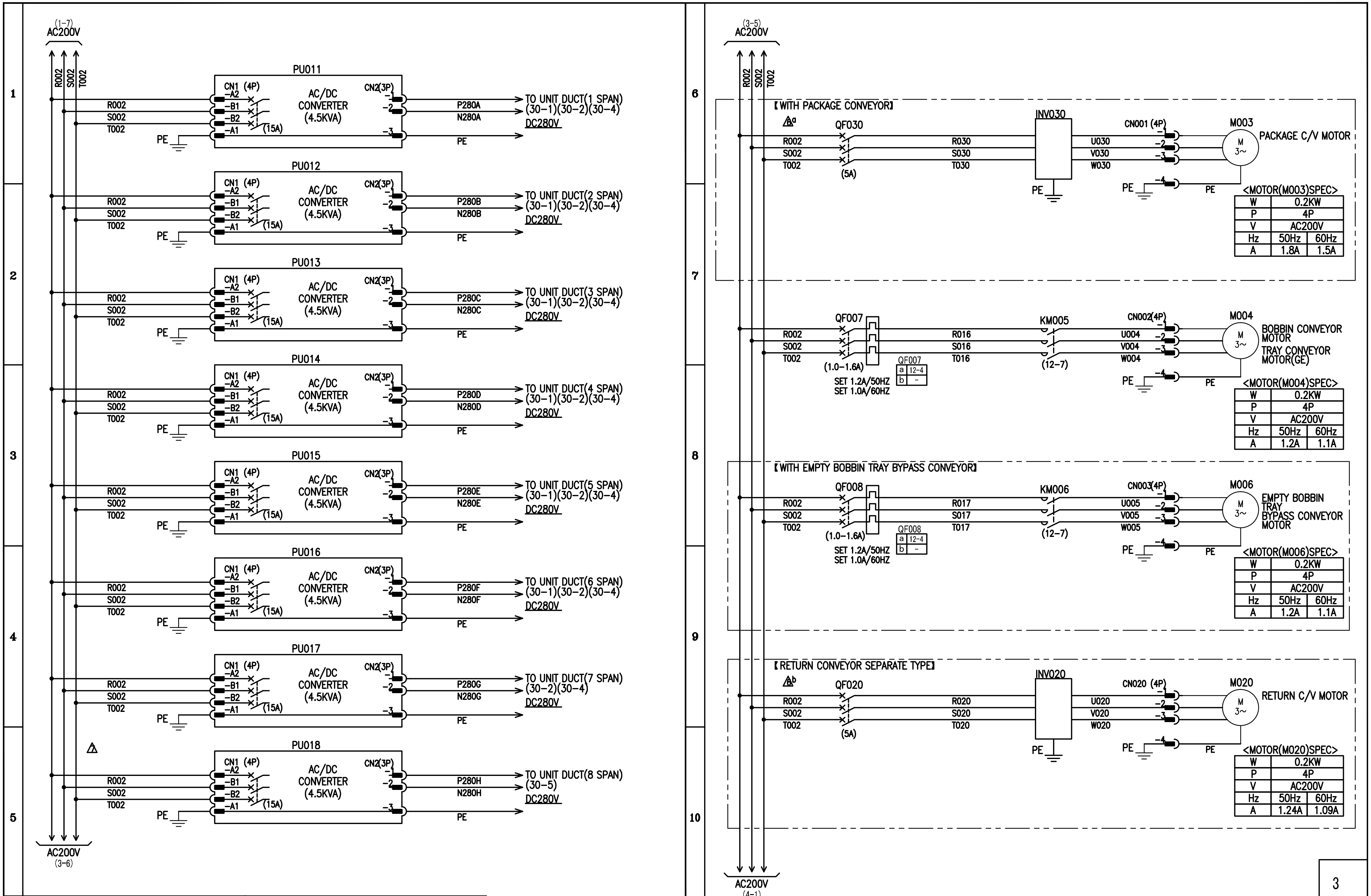
1
2
3
4
5
6
7
8
9
10
(1-7) AC200V
R002 S002 T002
PU011
PU012
PU013
PU014
PU015
PU016
PU017
PU018
CN1 (4P) -A2 -B1 -B2 -A1 (15A)
AC/DC CONVERTER (4.5KVA)
CN2(3P) -1 -2 -3
PE
P280A N280A
TO UNIT DUCT(1 SPAN) (30-1)(30-2)(30-4) DC280V
P280B N280B
TO UNIT DUCT(2 SPAN) (30-1)(30-2)(30-4) DC280V
P280C N280C
TO UNIT DUCT(3 SPAN) (30-1)(30-2)(30-4) DC280V
P280D N280D
TO UNIT DUCT(4 SPAN) (30-1)(30-2)(30-4) DC280V
P280E N280E
TO UNIT DUCT(5 SPAN) (30-1)(30-2)(30-4) DC280V
P280F N280F
TO UNIT DUCT(6 SPAN) (30-1)(30-2)(30-4) DC280V
P280G N280G
TO UNIT DUCT(7 SPAN) (30-2)(30-4) DC280V
P280H N280H
TO UNIT DUCT(8 SPAN) (30-5) DC280V
AC200V (3-6)
(3-5) AC200V
【WITH PACKAGE CONVEYOR】
QF030 (5A)
R030 S030 T030
INV030
U030 V030 W030
CN001 (4P)
M003 PACKAGE C/V MOTOR
<MOTOR(M003)SPEC> W 0.2KW P 4P V AC200V Hz 50Hz 60Hz A 1.8A 1.5A
QF007 (1.0-1.6A) SET 1.2A/50HZ SET 1.0A/60HZ
QF007 a 12-4 b -
R016 S016 T016
KM005 (12-7)
CN002(4P) U004 V004 W004
M004 BOBBIN CONVEYOR MOTOR TRAY CONVEYOR MOTOR(GE)
<MOTOR(M004)SPEC> W 0.2KW P 4P V AC200V Hz 50Hz 60Hz A 1.2A 1.1A
【WITH EMPTY BOBBIN TRAY BYPASS CONVEYOR】
QF008 (1.0-1.6A) SET 1.2A/50HZ SET 1.0A/60HZ
QF008 a 12-4 b -
R017 S017 T017
KM006 (12-7)
CN003(4P) U005 V005 W005
M006 EMPTY BOBBIN TRAY BYPASS CONVEYOR MOTOR
<MOTOR(M006)SPEC> W 0.2KW P 4P V AC200V Hz 50Hz 60Hz A 1.2A 1.1A
【RETURN CONVEYOR SEPARATE TYPE】
QF020 (5A)
R020 S020 T020
INV020
U020 V020 W020
CN020 (4P)
M020 RETURN C/V MOTOR
<MOTOR(M020)SPEC> W 0.2KW P 4P V AC200V Hz 50Hz 60Hz A 1.24A 1.09A
M 3~
AC200V (4-1)

3

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 |  | 15-06-26 |  | PU017追加 | 32 | 福沢 | 7 |  | 19-02-22 |  | 8スパン対応 | 34 | 平野 |
| 3 | a~b | 12-07-23 |  | 誤記修正 | 31 | 福沢 | 6 | a~b | 18-10-23 |  | ﾘﾀｰﾝC/V分割対応 |  |  |
| 2 | a~f | 12-03-29 |  | 電気記号変更 | 31 | 伊藤 |  | ~ |  |  | ﾊﾟｯｹｰｼﾞC/V INV化,ｼﾝﾎﾞﾙ置換え | 33 | 平野 |
| 1 | ~ | 12-02-13 |  | 図面名称修正 | 30 | 伊藤 | 5 | a~c | 15-07-16 |  | 誤記修正 | 32 | 福沢 |

備考 APPENDIX

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
|  |  |  | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |  |
| 検図 CHECKED | 2019 - 02 - 22 | K.KAWAMOTO |  |  |  |  |  |
| 設計 DESIGNED | 2011 - 11 - 28 | M.ITO | 尺度 SCALE |  | 図番 DRW.NO | 9CA-QA01B-34 | 407 |
| 製図 DRAWN | 2011 - 11 - 28 | M.YOSHIDA | サイズ SIZE | 2 |  |  |  |

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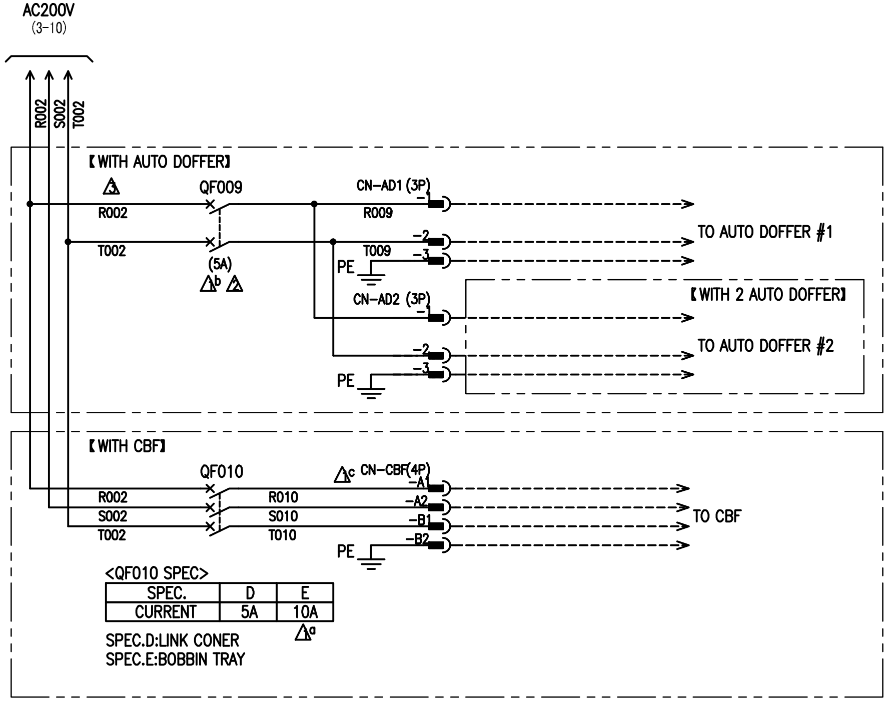
AC200V
(3-10)
R002
S002
T002
【WITH AUTO DOFFER】
△3
QF009
R002
T002
(5A)
△b △2
CN-AD1 (3P)
R009
T009
PE
-1
-2
-3
TO AUTO DOFFER #1
CN-AD2 (3P)
【WITH 2 AUTO DOFFER】
PE
TO AUTO DOFFER #2
【WITH CBF】
QF010
△c CN-CBF(4P)
R002
S002
T002
R010
S010
T010
-A1
-A2
-B1
-B2
PE
TO CBF

<QF010 SPEC>

| SPEC. | D | E |
|---|---|---|
| CURRENT | 5A | 10A △a |

SPEC.D:LINK CONER
SPEC.E:BOBBIN TRAY

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | ~ | 18-10-23 | | シンボル置換え | 41 | 平野 | | ~ | | | | | |
| △2 | ~ | 14-12-25 | | 誤記修正 | 41 | 福沢 | | ~ | | | | | |
| △1 | a~c | 12-02-10 | | ﾌﾞﾚｰｶ容量変更,ﾋﾟﾝ番号誤記修正 | 41 | 伊藤 | | ~ | | | | | |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018-10-23 | K.KAWAMOTO | MACHINE | 9CA | NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |
| DESIGNED | 2011-11-28 | M.ITO | SCALE | | DRW.NO | 9CA-QA01B-41 |
| DRAWN | 2011-11-28 | M.YOSHIDA | SIZE | 2 | | 103 |

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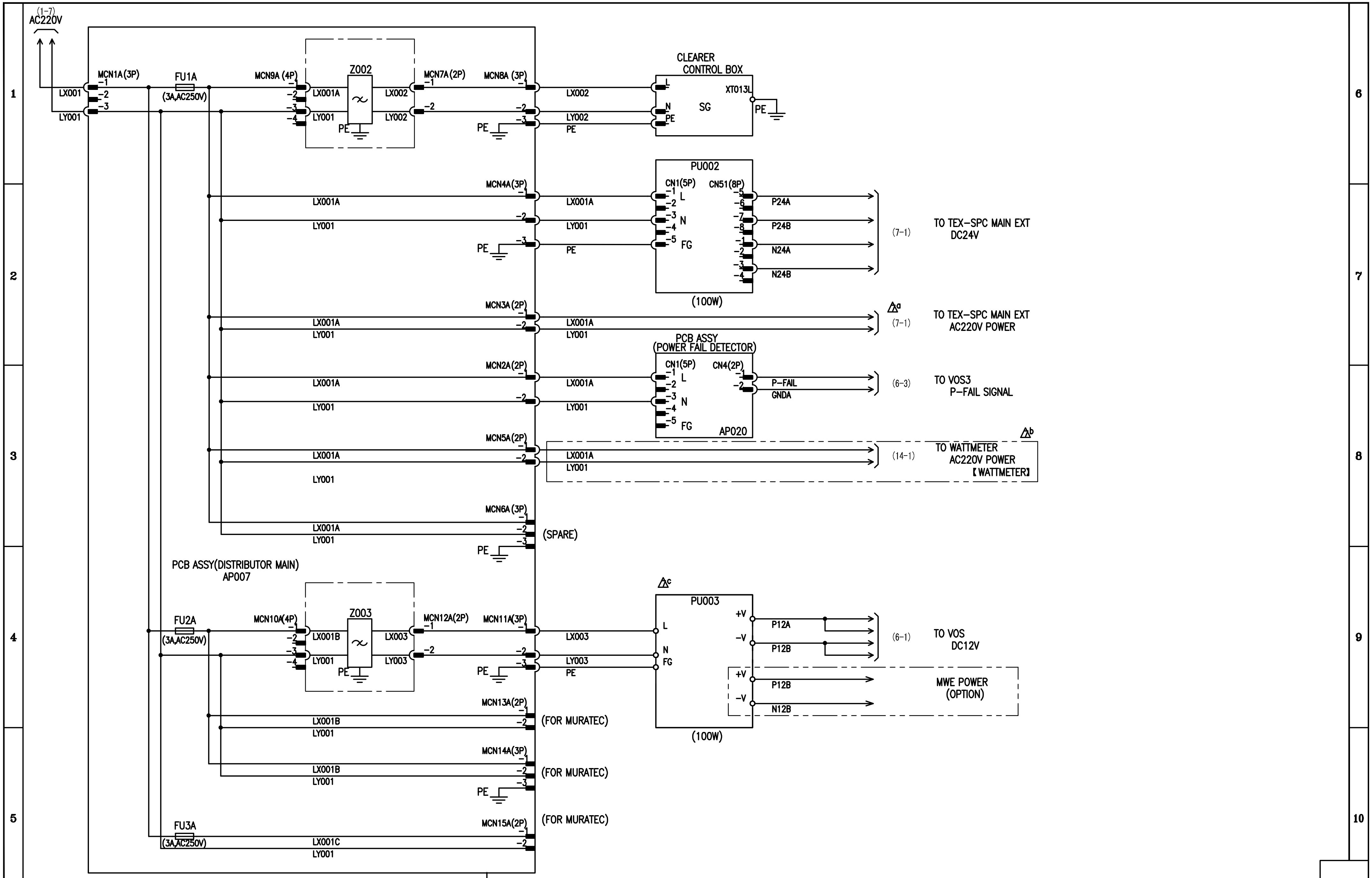
(1-7)
AC220V
LX001
LY001
MCN1A(3P)
-1
-2
-3
FU1A
(3A,AC250V)
MCN9A (4P)
Z002
LX001A
LY001
LX002
LY002
PE
MCN7A(2P)
MCN8A (3P)
CLEARER
CONTROL BOX
L
N
PE
SG
XT013L
PE
PU002
CN1(5P)
CN51(8P)
L
N
FG
P24A
P24B
N24A
N24B
(100W)
MCN4A(3P)
(7-1)
TO TEX-SPC MAIN EXT
DC24V
MCN3A(2P)
a
(7-1)
TO TEX-SPC MAIN EXT
AC220V POWER
PCB ASSY
(POWER FAIL DETECTOR)
CN1(5P)
CN4(2P)
P-FAIL
GNDA
AP020
MCN2A(2P)
(6-3)
TO VOS3
P-FAIL SIGNAL
MCN5A(2P)
b
(14-1)
TO WATTMETER
AC220V POWER
【WATTMETER】
MCN6A (3P)
(SPARE)
PCB ASSY(DISTRIBUTOR MAIN)
AP007
FU2A
(3A,AC250V)
MCN10A(4P)
Z003
LX001B
LY001
LX003
LY003
MCN12A(2P)
MCN11A(3P)
c
PU003
L
N
FG
+V
-V
P12A
P12B
(100W)
(6-1)
TO VOS
DC12V
+V
-V
P12B
N12B
MWE POWER
(OPTION)
MCN13A(2P)
(FOR MURATEC)
MCN14A(3P)
(FOR MURATEC)
FU3A
(3A,AC250V)
LX001C
LY001
MCN15A(2P)
(FOR MURATEC)
1
2
3
4
5
6
7
8
9
10

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △4 | ~ | 12-06-18 | | VOSサークル電源用回路追加 | 53 | 福沢 | | ~ | | | | | |
| △3 | a~e | 12-03-29 | | 電気記号変更 | 52 | 伊藤 | △7 | a~c | 18-10-23 | | VOS3.1対応,電力モニタ対応 | | |
| △2 | ~ | 12-02-10 | | クリアラーアース線追加 | 51 | 伊藤 | | ~ | | | シンボル置換え | 56 | 平野 |
| △1 | a~e | 12-01-16 | | SW電源ピン記変更,電気記号修正 | | | △6 | ~ | 13-12-24 | | 停電検出基板への変更 | 55 | 福沢 |
| | ~ | | | 基板名変更,ヒューズ容量変更 | 51 | 伊藤 | △5 | ~ | 12-10-31 | | VOSサークル電源用回路削除 | 54 | 福沢 |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018 - 10 - 23 | K.KAWAMOTO | MACHINE | 9CA | NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |
| DESIGNED | 2011 - 11 - 28 | M.ITO | SCALE | | DRW.NO | 9CA-QA01B-56 |
| DRAWN | 2011 - 11 - 28 | M.YOSHIDA | SIZE | 2 | | |

5

607

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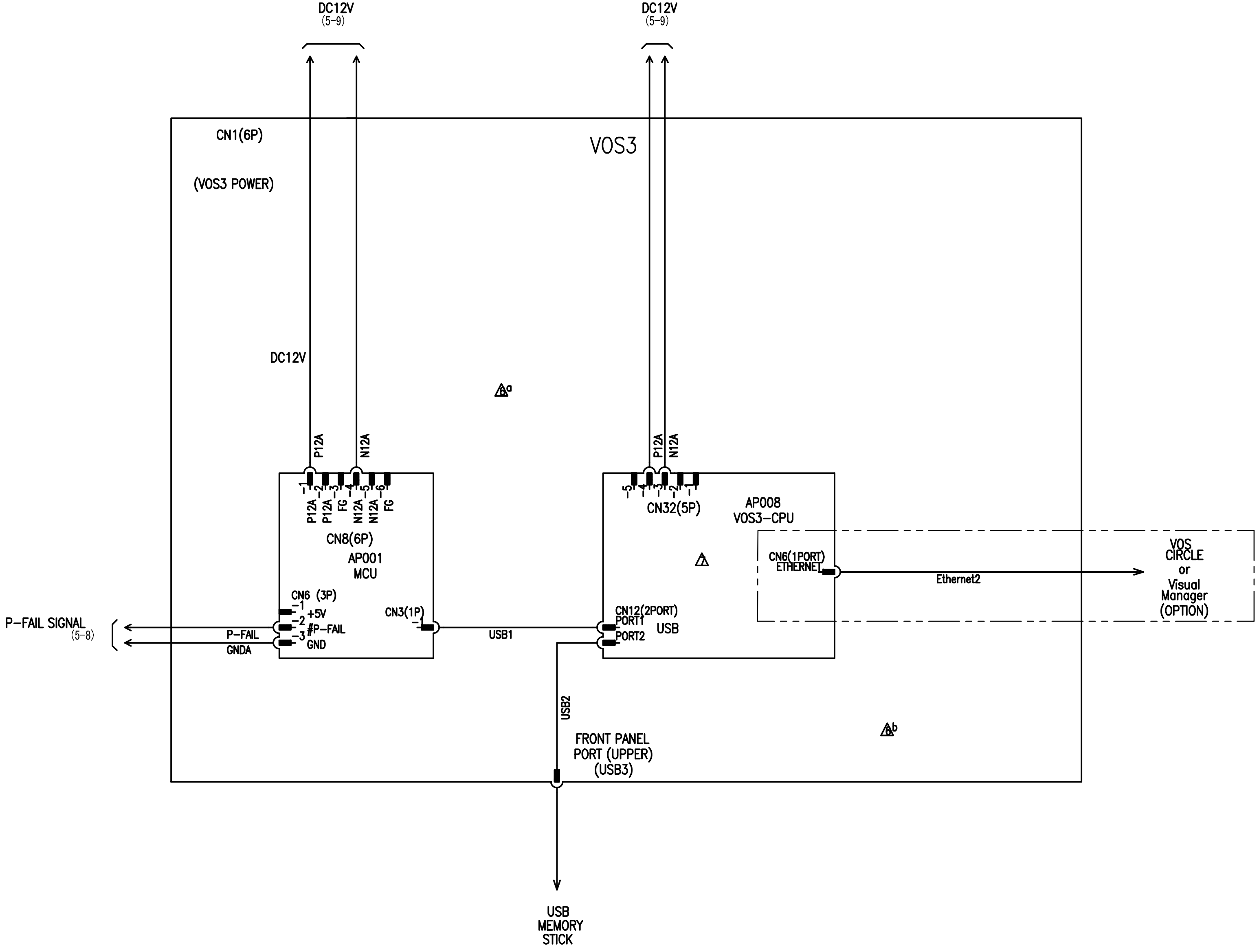
DC12V
(5-9)
DC12V
(5-9)
CN1(6P)
VOS3
(VOS3 POWER)
DC12V
6a
P12A
N12A
P12A
N12A
-1 -2 -3 -4 -5 -6
P12A P12A FG N12A N12A FG
CN8(6P)
AP001
MCU
-5 -4 -3 -2 -1
CN32(5P)
AP008
VOS3-CPU
7
CN6(1PORT)
ETHERNET
Ethernet2
VOS
CIRCLE
or
Visual
Manager
(OPTION)
CN6 (3P)
-1
-2 +5V
-3 #P-FAIL
GND
P-FAIL SIGNAL
(5-8)
P-FAIL
GNDA
CN3(1P)
-1
USB1
CN12(2PORT)
PORT1
PORT2
USB
USB2
6b
FRONT PANEL
PORT (UPPER)
(USB3)
USB
MEMORY
STICK

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | ~ | 16-11-28 | | MWE対応、シンボル置換え | 63 | 平野 | 7 | ~ | 18-12-19 | | 誤記修正（CPUボード変更<br>に伴うコネクタ名の修正） | 65 | 平野 |
| 3 | ~ | 13-02-20 | | コネクタピン配置変更 | 62 | 福沢 | | ~ | | | | | |
| 2 | ~ | 12-10-31 | | SW電源削除による回路変更 | 61 | 福沢 | 6 | a~b | 18-10-23 | | VOS3.1対応 | 65 | 平野 |
| 1 | ~ | 12-02-13 | | 図面名称修正 | 60 | 伊藤 | 5 | ~ | 17-09-11 | | SW電源変更 | 64 | 平野 |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018-12-19 | K.KAWAMOTO | MACHINE | 9CA | NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |
| DESIGNED | 2011-11-28 | M.ITO | SCALE | | DRW.NO | 9CA-QA01B-65 |
| DRAWN | 2011-11-28 | M.YOSHIDA | SIZE | 2 | | 507 |

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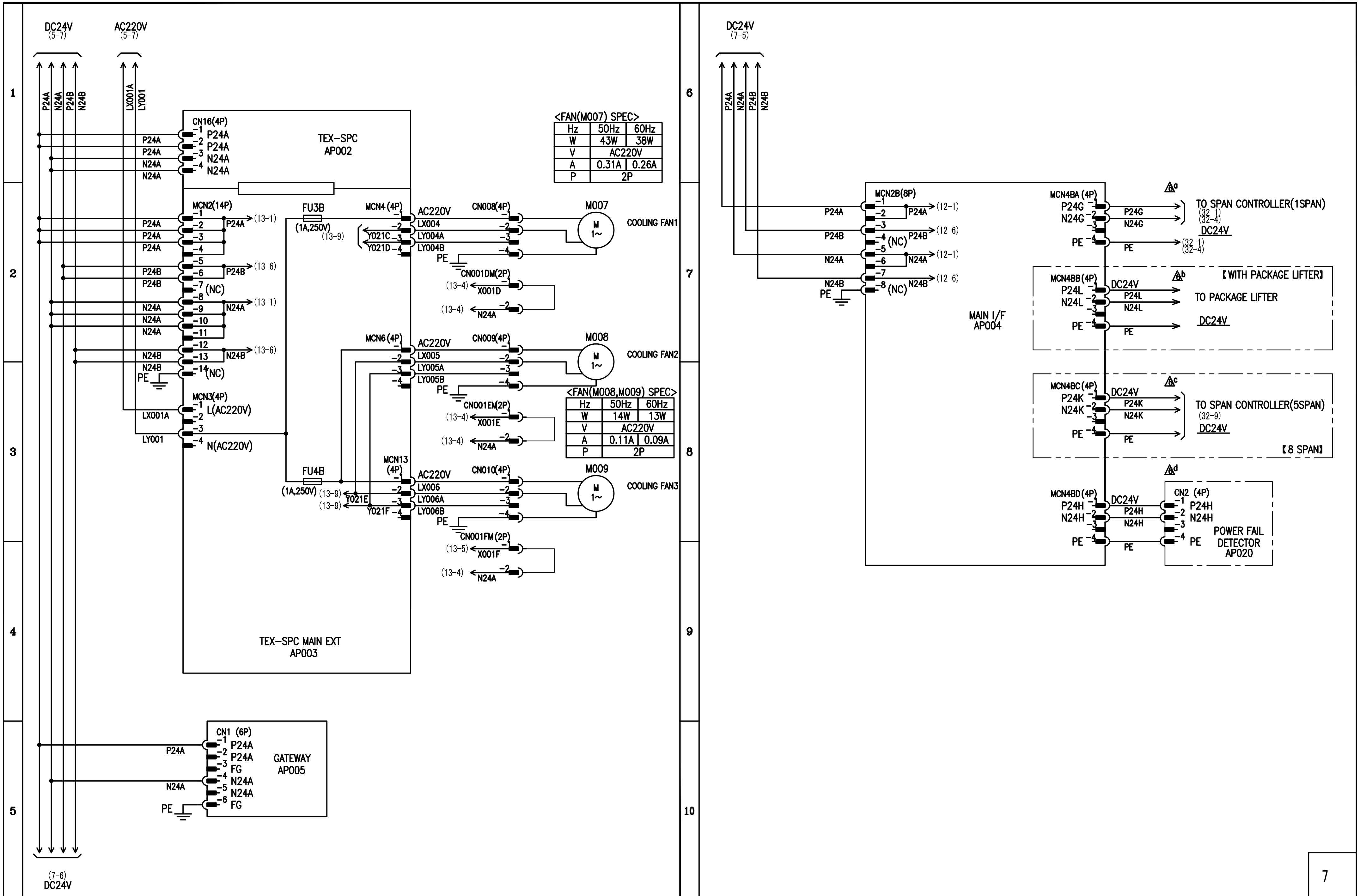
1
2
3
4
5
6
7
8
9
10
DC24V
(5-7)
AC220V
(5-7)
P24A
N24A
P24B
N24B
LX001A
LY001
CN16(4P)
TEX-SPC
AP002
MCN2(14P)
(NC)
PE
MCN3(4P)
L(AC220V)
N(AC220V)
FU3B
(1A,250V)
FU4B
(1A,250V)
MCN4(4P)
MCN6(4P)
MCN13 (4P)
AC220V
LX004
LY004A
LY004B
LX005
LY005A
LY005B
LX006
LY006A
LY006B
Y021C
Y021D
Y021E
Y021F
(13-1)
(13-6)
(13-9)
(13-4)
(13-5)
CN008(4P)
CN009(4P)
CN010(4P)
CN001DM(2P)
CN001EM(2P)
CN001FM(2P)
X001D
X001E
X001F
M007
M008
M009
M 1~
COOLING FAN1
COOLING FAN2
COOLING FAN3
TEX-SPC MAIN EXT
AP003
CN1 (6P)
FG
GATEWAY
AP005
(7-6)
DC24V
DC24V
(7-5)
MCN2B(8P)
(12-1)
(12-6)
MAIN I/F
AP004
MCN4BA (4P)
P24G
N24G
TO SPAN CONTROLLER(1SPAN)
(32-1)
(32-4)
MCN4BB(4P)
P24L
N24L
【WITH PACKAGE LIFTER】
TO PACKAGE LIFTER
MCN4BC(4P)
P24K
N24K
TO SPAN CONTROLLER(5SPAN)
(32-9)
【8 SPAN】
MCN4BD(4P)
P24H
N24H
CN2 (4P)
POWER FAIL DETECTOR
AP020
6a
6b
6c
6d

<FAN(M007) SPEC>

| Hz | 50Hz | 60Hz |
|---|---|---|
| W | 43W | 38W |
| V | AC220V | |
| A | 0.31A | 0.26A |
| P | 2P | |

<FAN(M008,M009) SPEC>

| Hz | 50Hz | 60Hz |
|---|---|---|
| W | 14W | 13W |
| V | AC220V | |
| A | 0.11A | 0.09A |
| P | 2P | |

7

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 15-06-26 | | M010追加 | 72 | 福沢 | 6 | a~d | 19-02-22 | ﾊﾟｯｹｰｼﾞﾘﾌﾀｰ仕様追加,8スパン対応 | | 74 | 平野 |
| 2 | a~c | 13-12-24 | | 停電検出基板追加,付帯情報追加 | 71 | 福沢 | 5 | ~ | 18-10-23 | | シンボル置換え | 73 | 平野 |
| 1 | a~f | 12-10-31 | | 誤記修正 | 70 | 福沢 | 4 | a~b | 15-12-21 | | M010削除,備考削除 | 73 | 春日 |

備考
APPENDIX

| | | | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) | |
|---|---|---|---|---|---|---|---|
| CHECKED | 2019-02-22 | K.KAWAMOTO | | | | | |
| DESIGNED | 2012-02-27 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA03B-74 | 406 |
| DRAWN | 2012-02-27 | M.ITO | サイズ SIZE | 2 | | | |

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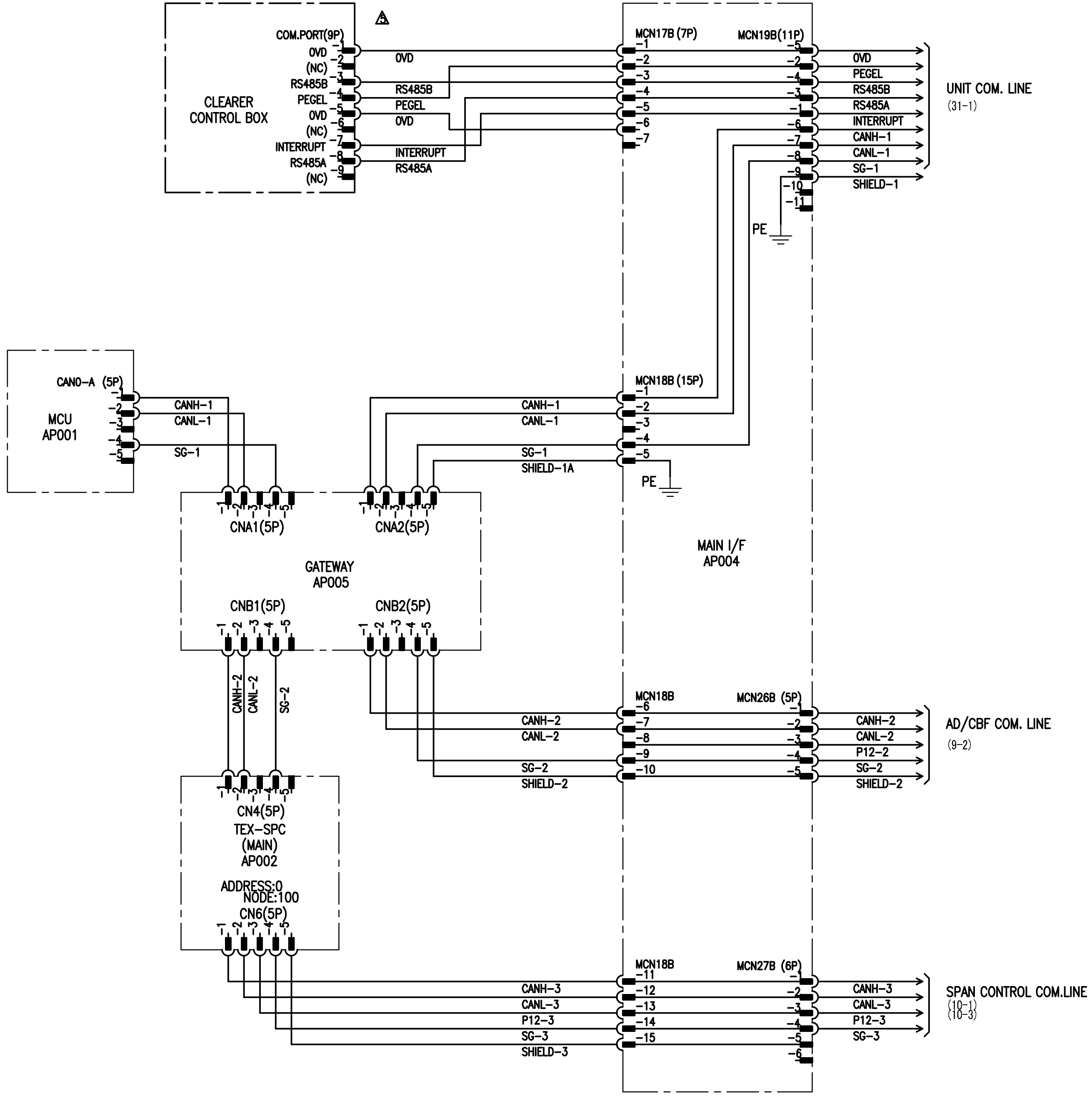
CLEARER
CONTROL BOX
COM.PORT(9P)
OVD -1
(NC) -2
RS485B -3
PEGEL -4
OVD -5
(NC) -6
INTERRUPT -7
RS485A -8
(NC) -9
OVD
RS485B
PEGEL
OVD
INTERRUPT
RS485A
MCN17B (7P)
MCN19B(11P)
OVD
PEGEL
RS485B
RS485A
INTERRUPT
CANH-1
CANL-1
SG-1
SHIELD-1
UNIT COM. LINE
(31-1)
PE
MCU
AP001
CAN0-A (5P)
CANH-1
CANL-1
SG-1
MCN18B (15P)
CANH-1
CANL-1
SG-1
SHIELD-1A
PE
CNA1(5P)
CNA2(5P)
GATEWAY
AP005
CNB1(5P)
CNB2(5P)
MAIN I/F
AP004
CANH-2
CANL-2
SG-2
MCN18B
MCN26B (5P)
CANH-2
CANL-2
SG-2
SHIELD-2
CANH-2
CANL-2
P12-2
SG-2
SHIELD-2
AD/CBF COM. LINE
(9-2)
CN4(5P)
TEX-SPC
(MAIN)
AP002
ADDRESS:0
NODE:100
CN6(5P)
MCN18B
MCN27B (6P)
CANH-3
CANL-3
P12-3
SG-3
SHIELD-3
CANH-3
CANL-3
P12-3
SG-3
SPAN CONTROL COM.LINE
(10-1)
(10-3)

<SWITCH AND JUMPER SETTING ON PRINTED CIRCUIT BOARD>

| MCU<br>AP001 | | |
|---|---|---|
| SW1 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| SW2 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| JP1 | | ON |
| JP2 | | ON |
| JP3 | | OFF |
| JP4 | | OFF |
| JP5 | | OFF |

| TEX-SPC(MAIN)<br>AP002 | | |
|---|---|---|
| SW2 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| SW3 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| SW4 | | 0 |
| SW5 | | 0 |
| JP1 | | +24V |
| JP2 | | ON |
| JP3 | | ON |
| JP4 | | ON |
| JP5 | | OFF |
| JP6 | | ON |
| JP7 | | ON |
| JP8 | | ON |
| JP9 | | ON |
| JP10 | | OFF |

| GATEWAY<br>AP005 | | | |
|---|---|---|---|
| SW1 | 1 | OFF | |
| | 2 | ON | |
| | 3 | OFF | |
| | 4 | OFF | |
| SW2 | 1 | ON | |
| | 2 | OFF | |
| | 3 | OFF | |
| | 4 | OFF | |
| SW3 | 1 | OFF | |
| | 2 | OFF | |
| | 3 | OFF | |
| | 4 | OFF | |
| JP1 | | OFF | |
| JP2 | | OFF | |
| JP3 | | M/G WITHOUT AD | ON |
| | | OTHER | OFF |
| JP4 | | | OFF |

△4

8

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | ~ | 17-02-10 | | JP4設定変更(ノイズ対策) | 81 | 平野 | | ~ | | | | | |
| △2 | a~f | 12-07-12 | | 誤記修正 | 80 | 福沢 | △5 | ~ | 18-10-23 | | CAD機能対応 | 82 | 平野 |
| △1 | ~ | 12-02-13 | | 図面名称修正 | 80 | 伊藤 | △4 | ~ | 17-10-30 | | JP3設定変更(ノイズ対策),シンボル置換え | 82 | 平野 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考 APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2018 - 10 - 23 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(COMMUNICATION LINE) | |
| 設計 DESIGNED | 2011 - 11 - 28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-82 | 205 |
| 製図 DRAWN | 2011 - 11 - 28 | M.YOSHIDA | サイズ SIZE | 2 | | | |

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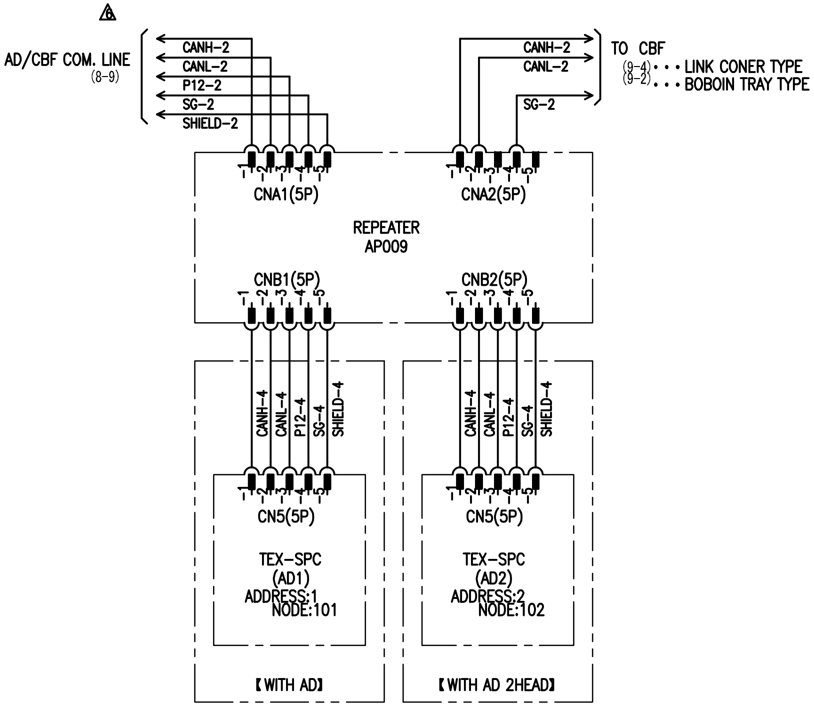
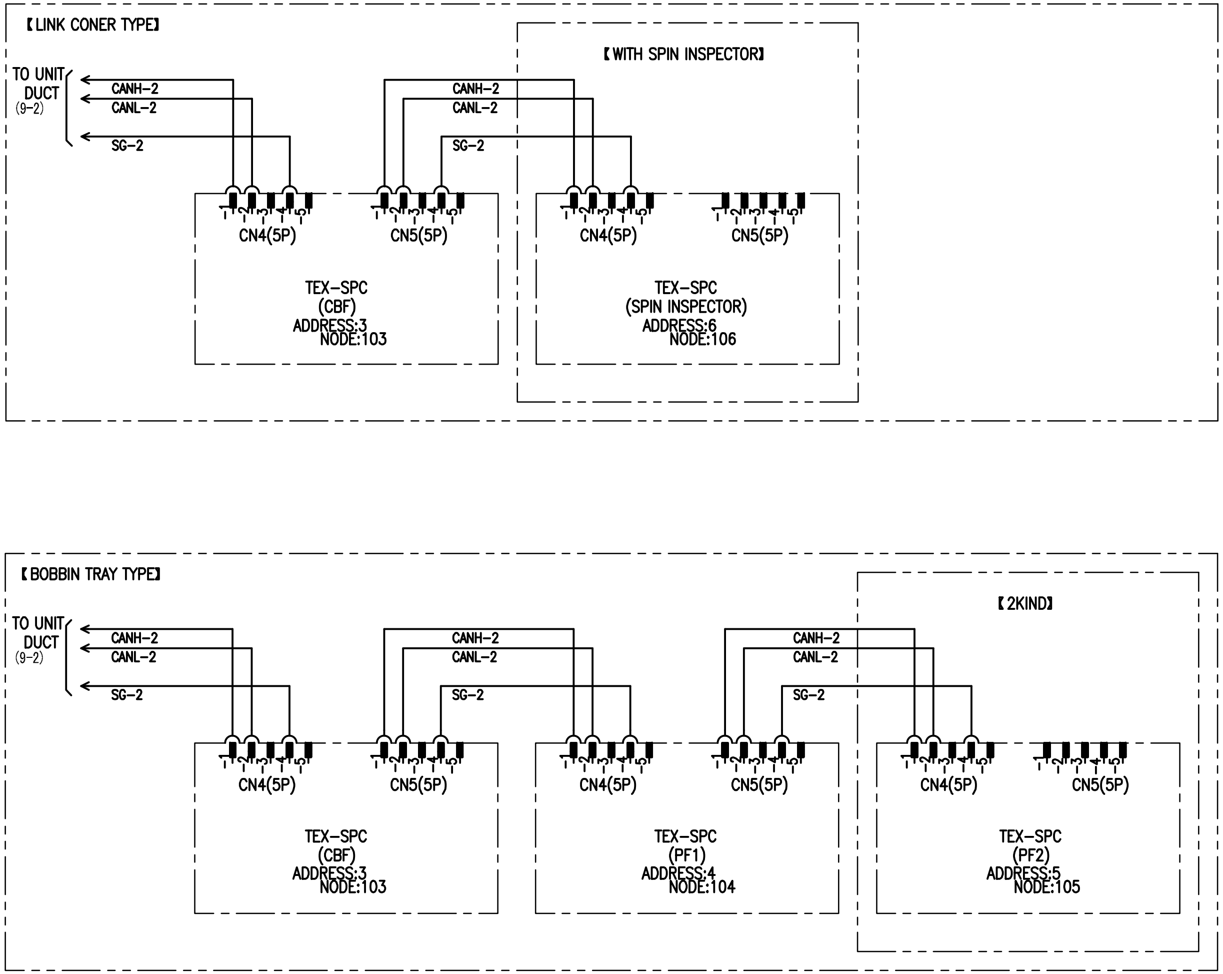

6
AD/CBF COM. LINE
(8-9)
CANH-2
CANL-2
P12-2
SG-2
SHIELD-2
TO CBF
(9-4) ・・・LINK CONER TYPE
(9-2) ・・・BOBOIN TRAY TYPE
CNA1(5P)
CNA2(5P)
REPEATER
AP009
CNB1(5P)
CNB2(5P)
1 2 3 4 5
CANH-4
CANL-4
P12-4
SG-4
SHIELD-4
CN5(5P)
TEX-SPC
(AD1)
ADDRESS:1
NODE:101
TEX-SPC
(AD2)
ADDRESS:2
NODE:102
【WITH AD】
【WITH AD 2HEAD】


【LINK CONER TYPE】
【WITH SPIN INSPECTOR】
TO UNIT DUCT
(9-2)
CANH-2
CANL-2
SG-2
CN4(5P)
CN5(5P)
TEX-SPC
(CBF)
ADDRESS:3
NODE:103
TEX-SPC
(SPIN INSPECTOR)
ADDRESS:6
NODE:106
【BOBBIN TRAY TYPE】
【2KIND】
TEX-SPC
(PF1)
ADDRESS:4
NODE:104
TEX-SPC
(PF2)
ADDRESS:5
NODE:105

| REPEATER<br>AP009 | | |
|---|---|---|
| SW1 | 1 | ON |
| | 2 | ON |
| | 3 | ON |
| | 4 | ON |
| SW2 | 1 | ON |
| | 2 | ON |
| | 3 | ON |
| | 4 | ON |
| SW3 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| JP1 | | WITH CBF : OFF |
| | | WITHOUT CBF : ON |
| JP2 | | OFF |
| JP3 | | AD 1HEAD : ON |
| | | AD 2HEAD : OFF |
| JP4 | | AD 1HEAD : OFF |
| | | AD 2HEAD : ON |

5

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~h | 12-07-12 | | 誤記修正 | 90 | 福沢 | 6 | ~ | 18-10-23 | | CAD機能対応 | 92 | 平野 |
| 2 | a~b | 12-02-13 | | 基板設定条件追加、図面名称変更 | 90 | 伊藤 | 5 | ~ | 17-10-30 | | JP3設定変更(ノイズ対策),シンボル置換え | 92 | 平野 |
| 1 | a~l | 12-01-11 | | コネクタ名誤記訂正 | 90 | 伊藤 | 4 | a~c | 14-12-25 | | シールド追加、基板設定追加 | 91 | 福沢 |

備考
APPENDIX

| | | | | |
|---|---|---|---|---|
| 検図 CHECKED | 2018 - 10 - 23 | K.KAWAMOTO | 機種 MACHINE | 9CA |
| 設計 DESIGNED | 2011 - 11 - 28 | M.ITO | 尺度 SCALE | |
| 製図 DRAWN | 2011 - 11 - 28 | M.YOSHIDA | サイズ SIZE | 2 |

名称 NAME: SEQUENCE DIAGRAM (COMMUNICATION LINE)

図番 DRW.NO: 9CA-QA01B-92

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9

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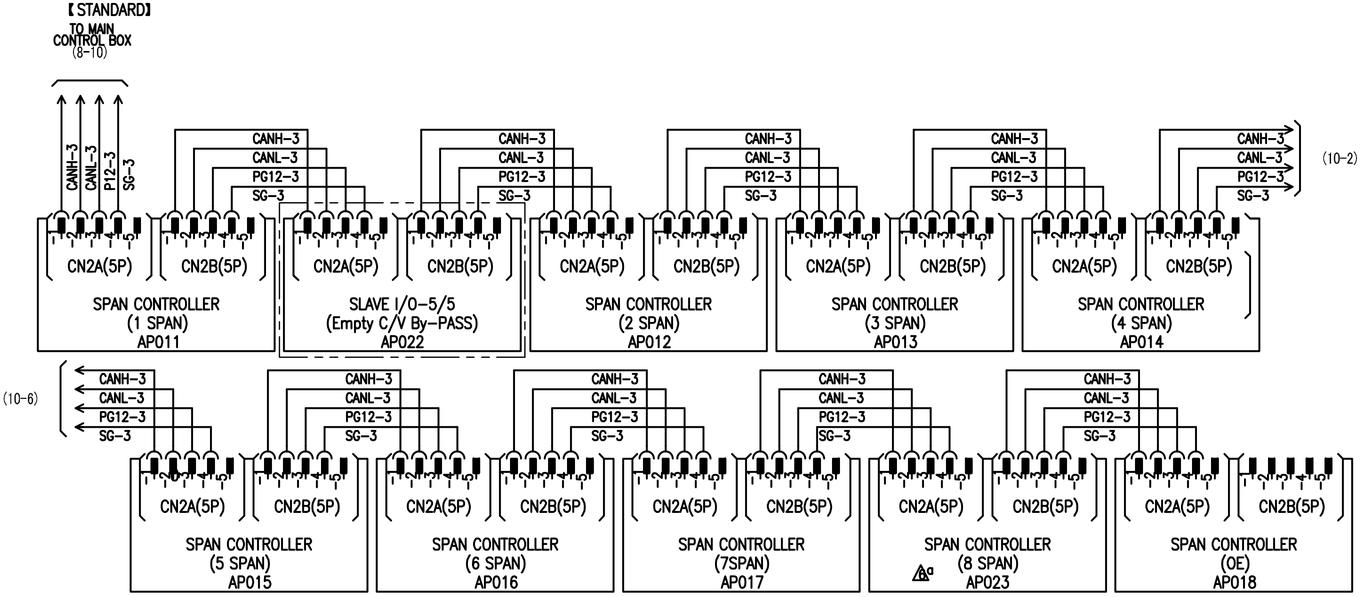

【STANDARD】
TO MAIN CONTROL BOX (8-10)
CANH-3
CANL-3
P12-3
SG-3
PG12-3
(10-2)
(10-6)
CN2A(5P)
CN2B(5P)
SPAN CONTROLLER (1 SPAN) AP011
SLAVE I/O-5/5 (Empty C/V By-PASS) AP022
SPAN CONTROLLER (2 SPAN) AP012
SPAN CONTROLLER (3 SPAN) AP013
SPAN CONTROLLER (4 SPAN) AP014
SPAN CONTROLLER (5 SPAN) AP015
SPAN CONTROLLER (6 SPAN) AP016
SPAN CONTROLLER (7SPAN) AP017
SPAN CONTROLLER (8 SPAN) AP023
SPAN CONTROLLER (OE) AP018

<SWITCH AND JUMPER SETTING ON PRINTED CIRCUIT BOARD>

| SPAN CONTROLLER (1 SPAN) | | |
|---|---|---|
| SW1 | | 1 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SLAVE I/O-5/5 (Empty C/V By-PASS) | | |
|---|---|---|
| SW1 | | B |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (2 SPAN) | | |
|---|---|---|
| SW1 | | 2 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (3 SPAN) | | |
|---|---|---|
| SW1 | | 3 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (4 SPAN) | | |
|---|---|---|
| SW1 | | 4 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

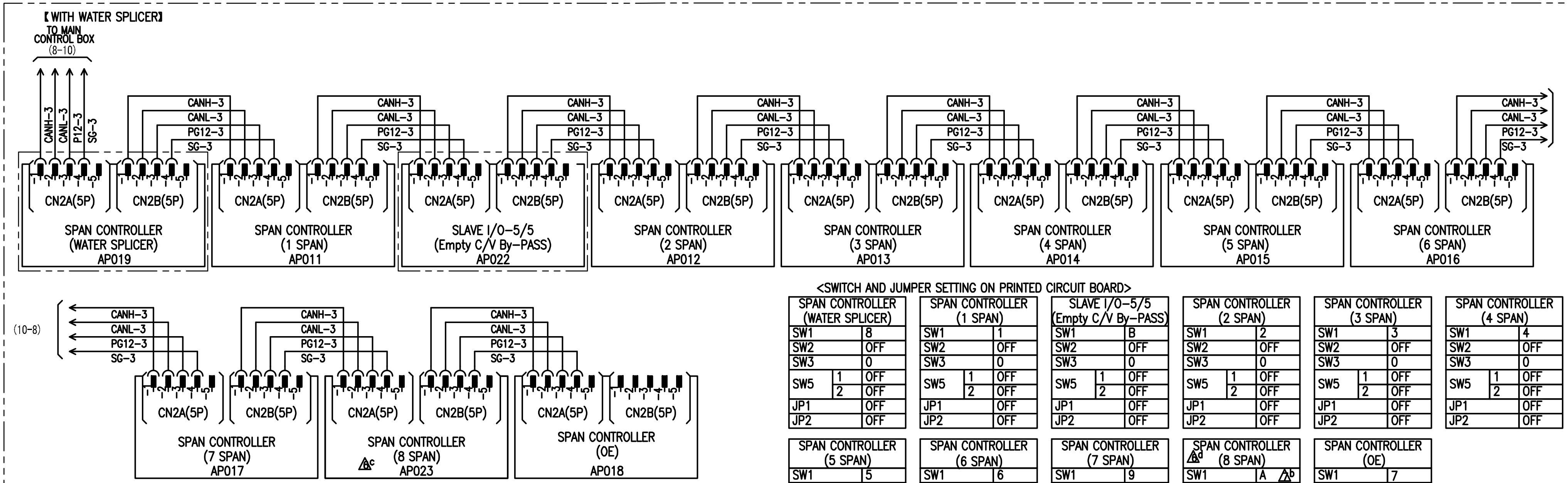
| SPAN CONTROLLER (5 SPAN) | | |
|---|---|---|
| SW1 | | 5 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (6 SPAN) | | |
|---|---|---|
| SW1 | | 6 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (7 SPAN) | | |
|---|---|---|
| SW1 | | 9 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| 6b SPAN CONTROLLER (8 SPAN) | | |
|---|---|---|
| SW1 | | A 7a |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (OE) | | |
|---|---|---|
| SW1 | | 7 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | ON |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |


【WITH WATER SPLICER】
TO MAIN CONTROL BOX (8-10)
CANH-3
CANL-3
P12-3
SG-3
PG12-3
(10-4)
(10-8)
CN2A(5P)
CN2B(5P)
SPAN CONTROLLER (WATER SPLICER) AP019
SPAN CONTROLLER (1 SPAN) AP011
SLAVE I/O-5/5 (Empty C/V By-PASS) AP022
SPAN CONTROLLER (2 SPAN) AP012
SPAN CONTROLLER (3 SPAN) AP013
SPAN CONTROLLER (4 SPAN) AP014
SPAN CONTROLLER (5 SPAN) AP015
SPAN CONTROLLER (6 SPAN) AP016
SPAN CONTROLLER (7 SPAN) AP017
SPAN CONTROLLER (8 SPAN) AP023
SPAN CONTROLLER (OE) AP018

<SWITCH AND JUMPER SETTING ON PRINTED CIRCUIT BOARD>

| SPAN CONTROLLER (WATER SPLICER) | | |
|---|---|---|
| SW1 | | 8 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (1 SPAN) | | |
|---|---|---|
| SW1 | | 1 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SLAVE I/O-5/5 (Empty C/V By-PASS) | | |
|---|---|---|
| SW1 | | B |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (2 SPAN) | | |
|---|---|---|
| SW1 | | 2 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (3 SPAN) | | |
|---|---|---|
| SW1 | | 3 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (4 SPAN) | | |
|---|---|---|
| SW1 | | 4 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (5 SPAN) | | |
|---|---|---|
| SW1 | | 5 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (6 SPAN) | | |
|---|---|---|
| SW1 | | 6 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (7 SPAN) | | |
|---|---|---|
| SW1 | | 9 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| 6d SPAN CONTROLLER (8 SPAN) | | |
|---|---|---|
| SW1 | | A 7b |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | OFF |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| SPAN CONTROLLER (OE) | | |
|---|---|---|
| SW1 | | 7 |
| SW2 | | OFF |
| SW3 | | 0 |
| SW5 | 1 | ON |
| | 2 | OFF |
| JP1 | | OFF |
| JP2 | | OFF |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | a~d | 16-12-22 | | AP022追加,シンボル置換え | A2 | 平野 | | | | | | | |
| 3 | a~f | 15-06-26 | | AP017追加 | A1 | 福沢 | 7 | a~b | 19-05-29 | | アドレス誤記訂正 | A3 | 平野 |
| 2 | a~c | 12-07-12 | | 線番修正 | A0 | 福沢 | 6 | a~d | 19-02-22 | | 8スパン対応 | A3 | 平野 |
| 1 | ~ | 12-02-13 | | 図面名称修正 | A0 | 伊藤 | 5 | ~ | 18-10-23 | | CAD機能対応 | A2 | 平野 |

備考 APPENDIX

| | | |
|---|---|---|
| 検図 CHECKED | 2019 - 05 - 29 | K.KAWAMOTO |
| 設計 DESIGNED | 2011 - 11 - 28 | M.ITO |
| 製図 DRAWN | 2011 - 11 - 28 | M.YOSHIDA |

| | | | |
|---|---|---|---|
| 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM (COMMUNICATION LINE) |
| 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-A3 |
| サイズ SIZE | 2 | | 307 |

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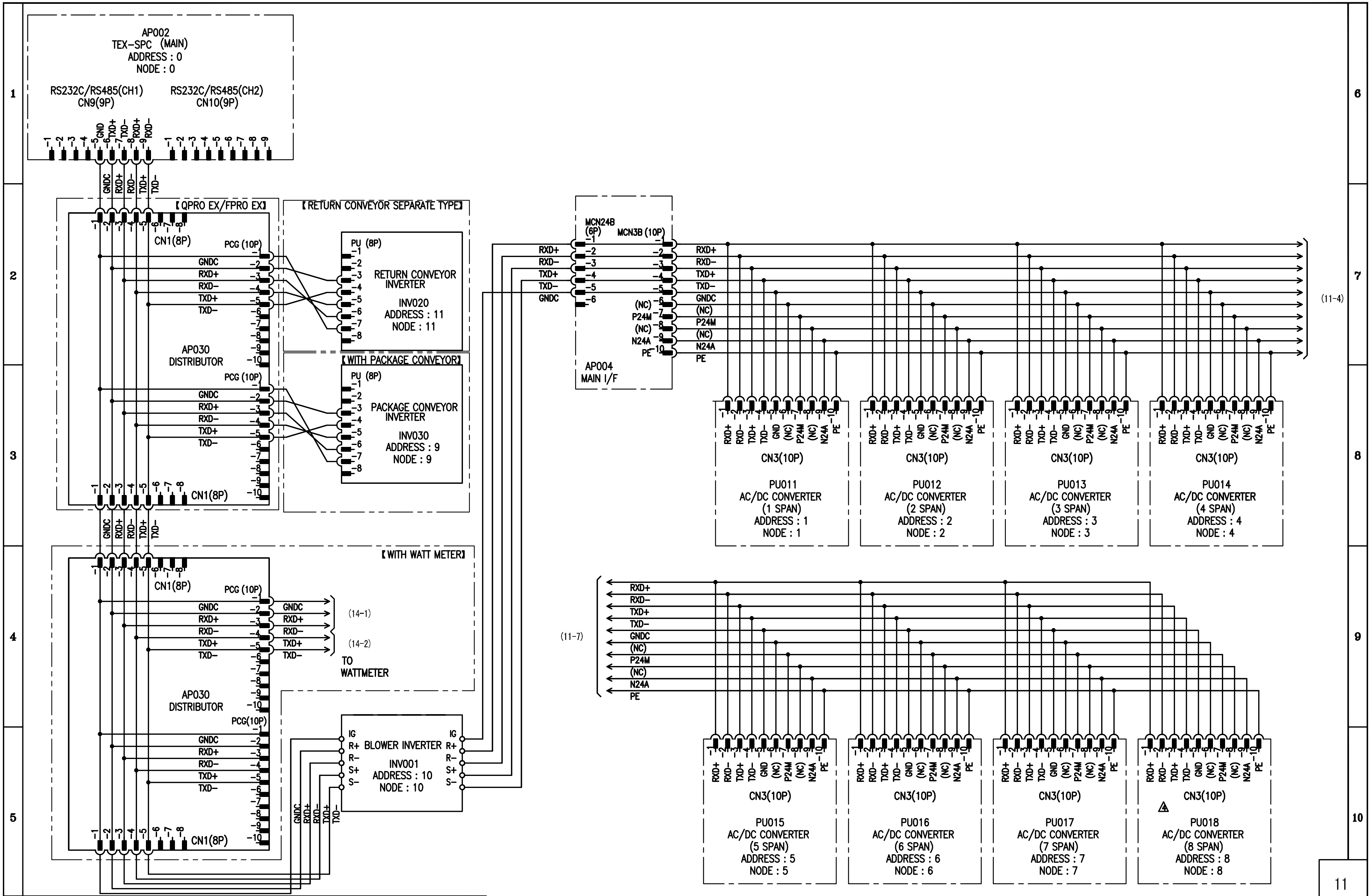

1
2
3
4
5
6
7
8
9
10
AP002
TEX-SPC (MAIN)
ADDRESS : 0
NODE : 0
RS232C/RS485(CH1)
CN9(9P)
RS232C/RS485(CH2)
CN10(9P)
GND
TXD+
TXD-
RXD+
RXD-
GNDC
RXD+
RXD-
TXD+
TXD-
【QPRO EX/FPRO EX】
【RETURN CONVEYOR SEPARATE TYPE】
CN1(8P)
PCG (10P)
AP030
DISTRIBUTOR
PU (8P)
RETURN CONVEYOR
INVERTER
INV020
ADDRESS : 11
NODE : 11
【WITH PACKAGE CONVEYOR】
PACKAGE CONVEYOR
INVERTER
INV030
ADDRESS : 9
NODE : 9
【WITH WATT METER】
(14-1)
(14-2)
TO
WATTMETER
BLOWER INVERTER
INV001
ADDRESS : 10
NODE : 10
IG
R+
R-
S+
S-
MCN24B
(6P)
MCN3B (10P)
(NC)
P24M
N24A
PE
AP004
MAIN I/F
(11-4)
(11-7)
CN3(10P)
PU011
AC/DC CONVERTER
(1 SPAN)
ADDRESS : 1
NODE : 1
PU012
AC/DC CONVERTER
(2 SPAN)
ADDRESS : 2
NODE : 2
PU013
AC/DC CONVERTER
(3 SPAN)
ADDRESS : 3
NODE : 3
PU014
AC/DC CONVERTER
(4 SPAN)
ADDRESS : 4
NODE : 4
PU015
AC/DC CONVERTER
(5 SPAN)
ADDRESS : 5
NODE : 5
PU016
AC/DC CONVERTER
(6 SPAN)
ADDRESS : 6
NODE : 6
PU017
AC/DC CONVERTER
(7 SPAN)
ADDRESS : 7
NODE : 7
4
PU018
AC/DC CONVERTER
(8 SPAN)
ADDRESS : 8
NODE : 8

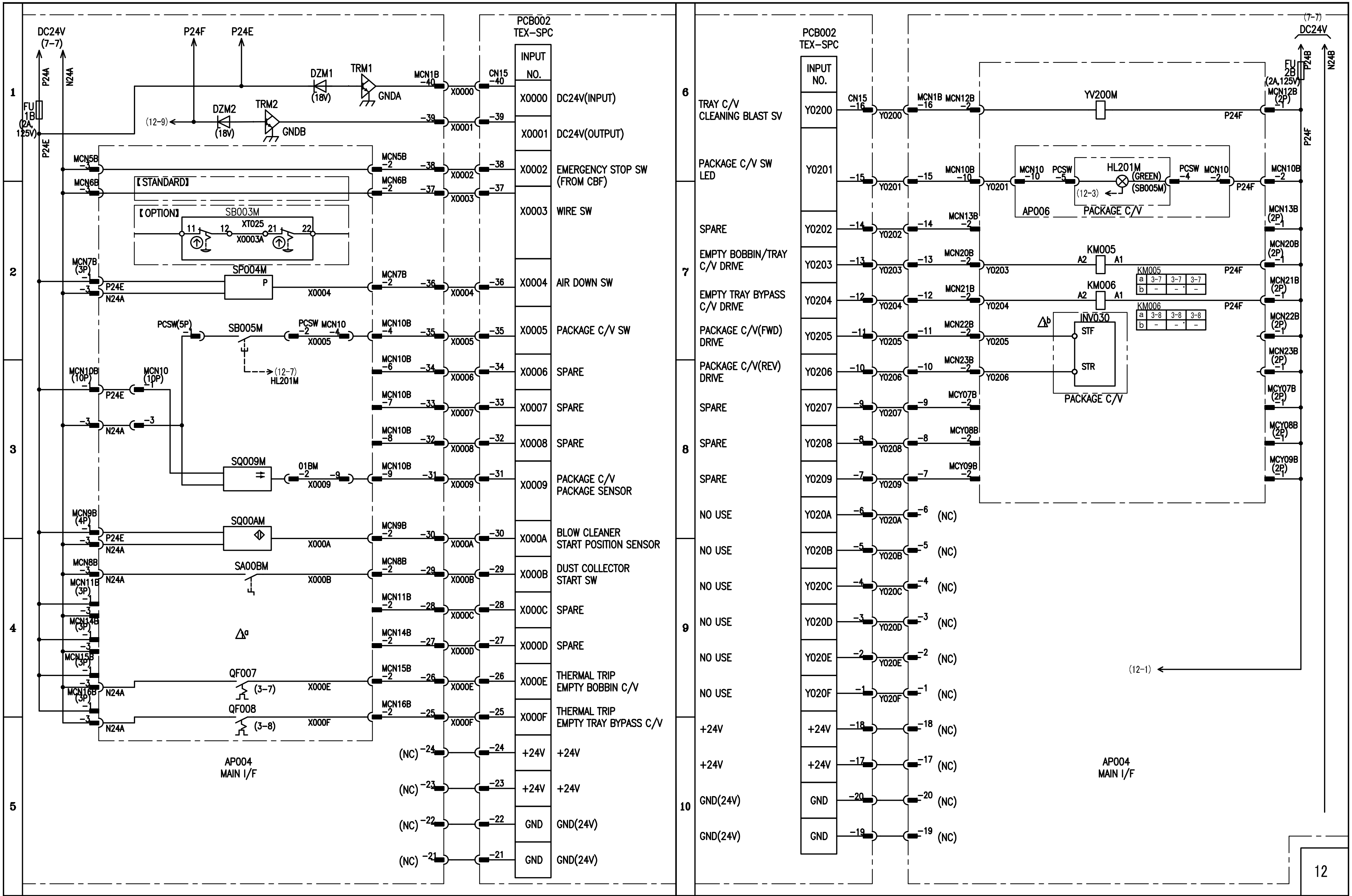
11

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a ~ d<br>~ | 18-10-23 | | 電力ﾓﾆﾀ対応,ﾊﾟｯｹｰｼﾞC/V INV化,<br>ﾘﾀｰﾝC/V分割対応,QPRO EX対応 | B2 | 平野 | | ~ | | | | | |
| 2 | ~ | 15-06-26 | | PU017追加 | B1 | 福沢 | | ~ | | | | | |
| 1 | ~ | 12-02-13 | | 図面名称修正 | B0 | 伊藤 | 4 | ~ | 19-02-22 | | 8スパン対応 | B3 | 平野 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019 - 02 - 22 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(COMMUNICATION LINE) |
| 設計 DESIGNED | 2018 - 06 - 29 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-B3 |
| 製図 DRAWN | 2018 - 06 - 29 | M.YOSHIDA | サイズ SIZE | 2 | | 304 |

muratec MURATA MACHINERY, LTD.


DC24V (7-7)
P24F
P24E
P24A
N24A
FU 1B (2A 125V)
DZM1 (18V)
TRM1
GNDA
DZM2 (18V)
TRM2
GNDB
(12-9)
MCN1B
PCB002 TEX-SPC
CN15
INPUT NO.
MCN5B
MCN6B
【STANDARD】
【OPTION】
SB003M
XT025
X0003A
MCN7B (3P)
SP004M
P
PCSW(5P)
SB005M
PCSW
MCN10
(12-7) HL201M
MCN10B (10P)
MCN10 (10P)
SQ009M
01BM
MCN9B (4P)
SQ00AM
MCN8B
SA00BM
MCN11B (3P)
MCN14B (3P)
MCN15B (3P)
MCN16B (3P)
QF007 (3-7)
QF008 (3-8)
Δa
AP004 MAIN I/F
(NC)
X0000 DC24V(INPUT)
X0001 DC24V(OUTPUT)
X0002 EMERGENCY STOP SW (FROM CBF)
X0003 WIRE SW
X0004 AIR DOWN SW
X0005 PACKAGE C/V SW
X0006 SPARE
X0007 SPARE
X0008 SPARE
X0009 PACKAGE C/V PACKAGE SENSOR
X000A BLOW CLEANER START POSITION SENSOR
X000B DUST COLLECTOR START SW
X000C SPARE
X000D SPARE
X000E THERMAL TRIP EMPTY BOBBIN C/V
X000F THERMAL TRIP EMPTY TRAY BYPASS C/V
+24V +24V
+24V +24V
GND GND(24V)
GND GND(24V)
TRAY C/V CLEANING BLAST SV Y0200
PACKAGE C/V SW LED Y0201
SPARE Y0202
EMPTY BOBBIN/TRAY C/V DRIVE Y0203
EMPTY TRAY BYPASS C/V DRIVE Y0204
PACKAGE C/V(FWD) DRIVE Y0205
PACKAGE C/V(REV) DRIVE Y0206
SPARE Y0207
SPARE Y0208
SPARE Y0209
NO USE Y020A
NO USE Y020B
NO USE Y020C
NO USE Y020D
NO USE Y020E
NO USE Y020F
+24V +24V
+24V +24V
GND(24V) GND
GND(24V) GND
MCN1B MCN12B
YV200M
FU 2B (2A,125V)
MCN12B (2P)
P24B
N24B
DC24V (7-7)
AP006
PACKAGE C/V
HL201M (GREEN) (SB005M)
(12-3)
MCN13B (2P)
MCN20B (2P)
KM005 A2 A1
KM005 a 3-7 3-7 3-7 b - - -
MCN21B (2P)
KM006 A2 A1
KM006 a 3-8 3-8 3-8 b - - -
MCN22B (2P)
Δb
INV030 STF STR
PACKAGE C/V
MCN23B (2P)
MCY07B (2P)
MCY08B (2P)
MCY09B (2P)
(12-1)
AP004 MAIN I/F
1
2
3
4
5
6
7
8
9
10

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| | ~ | | | | | | | ~ | | | | | |
| △a | a~b | 18-10-23 | | ﾊﾟｯｹｰｼﾞC/V INV化,ｼﾝﾎﾞﾙ置換え | C1 | 平野 | | ~ | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機 種 MACHINE | 9CA | 名 称 NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) |
| 検 図 CHECKED | 2018-10-23 | K.KAWAMOTO | | | | |
| 設 計 DESIGNED | 2018-08-21 | M.ITO | 尺 度 SCALE | | 図 番 DRW.NO | 9CA-QA03B-C1 |
| 製 図 DRAWN | 2018-08-21 | M.YOSHIDA | サイズ SIZE | 2 | | 101 |

12

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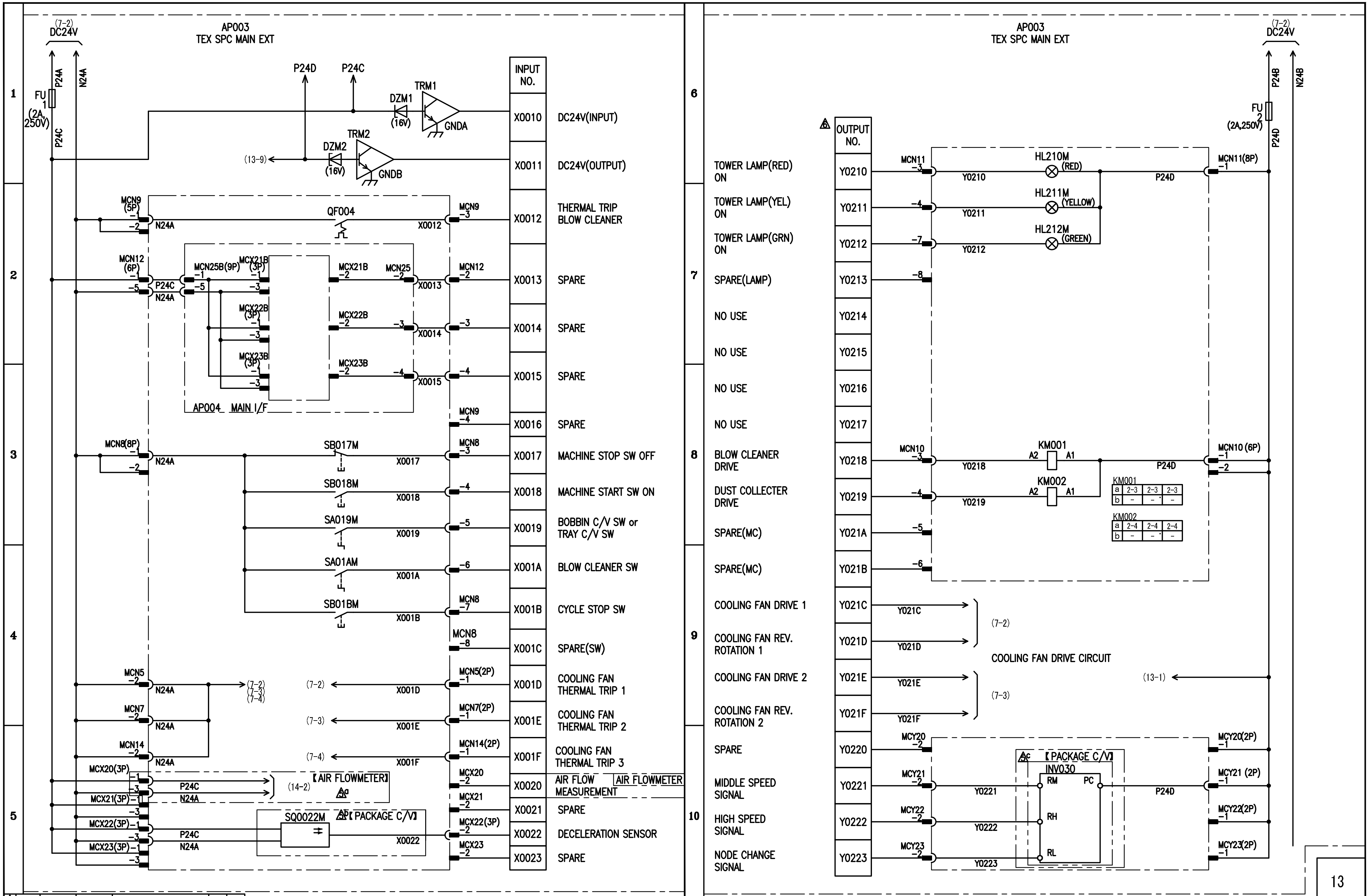
(7-2)
DC24V
AP003
TEX SPC MAIN EXT
FU 1 (2A, 250V)
P24A
N24A
P24C
P24D
P24C
TRM1
DZM1 (16V)
GNDA
TRM2
DZM2 (16V)
GNDB
(13-9)
INPUT NO.
X0010 DC24V(INPUT)
X0011 DC24V(OUTPUT)
MCN9 (5P)
QF004
X0012 THERMAL TRIP BLOW CLEANER
MCN12 (6P)
MCN25B(9P)
MCX21B (3P)
MCX21B
MCN25
X0013 SPARE
MCX22B (3P)
MCX22B
X0014 SPARE
MCX23B (3P)
MCX23B
X0015 SPARE
AP004 MAIN I/F
X0016 SPARE
MCN8(8P)
SB017M
X0017 MACHINE STOP SW OFF
SB018M
X0018 MACHINE START SW ON
SA019M
X0019 BOBBIN C/V SW or TRAY C/V SW
SA01AM
X001A BLOW CLEANER SW
SB01BM
X001B CYCLE STOP SW
MCN8
X001C SPARE(SW)
MCN5
MCN5(2P)
(7-2) (7-3) (7-4)
X001D COOLING FAN THERMAL TRIP 1
MCN7
MCN7(2P)
(7-3)
X001E COOLING FAN THERMAL TRIP 2
MCN14
MCN14(2P)
(7-4)
X001F COOLING FAN THERMAL TRIP 3
MCX20(3P)
【AIR FLOWMETER】
(14-2)
MCX20
X0020 AIR FLOW MEASUREMENT
AIR FLOWMETER
MCX21(3P)
MCX21
X0021 SPARE
MCX22(3P)
SQ0022M
【PACKAGE C/V】
MCX22(3P)
X0022 DECELERATION SENSOR
MCX23(3P)
MCX23
X0023 SPARE
(7-2)
DC24V
AP003
TEX SPC MAIN EXT
P24B
N24B
FU 2 (2A,250V)
P24D
OUTPUT NO.
TOWER LAMP(RED) ON Y0210
MCN11
HL210M (RED)
MCN11(8P)
TOWER LAMP(YEL) ON Y0211
HL211M (YELLOW)
TOWER LAMP(GRN) ON Y0212
HL212M (GREEN)
SPARE(LAMP) Y0213
NO USE Y0214
NO USE Y0215
NO USE Y0216
NO USE Y0217
BLOW CLEANER DRIVE Y0218
MCN10
KM001
A2 A1
MCN10 (6P)
DUST COLLECTER DRIVE Y0219
KM002
A2 A1
KM001
a 2-3 2-3 2-3
b - - -
KM002
a 2-4 2-4 2-4
b - - -
SPARE(MC) Y021A
SPARE(MC) Y021B
COOLING FAN DRIVE 1 Y021C
COOLING FAN REV. ROTATION 1 Y021D
(7-2)
COOLING FAN DRIVE CIRCUIT
COOLING FAN DRIVE 2 Y021E
(13-1)
COOLING FAN REV. ROTATION 2 Y021F
(7-3)
SPARE Y0220
MCY20
MCY20(2P)
【PACKAGE C/V】
INV030
RM PC RH RL
MIDDLE SPEED SIGNAL Y0221
MCY21
MCY21 (2P)
HIGH SPEED SIGNAL Y0222
MCY22
MCY22(2P)
NODE CHANGE SIGNAL Y0223
MCY23
MCY23(2P)
1 2 3 4 5 6 7 8 9 10
13

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|
| 4 | ~ | 15-10-28 | | SC001削除 | D3 | 春日 |
| 3 | ~ | 14-11-08 | | SC001追加 | D2 | 福沢 |
| 2 | ~ | 12-03-29 | | 電気記号変更 | D1 | 伊藤 |
| 1 | ~ | 12-02-13 | | 図面名称修正 | D0 | 伊藤 |

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|
| 6 | ~ | 19-12-25 | | 誤記修正 | D4 | 平野 |
| 5 | a~c | 18-10-23 | | ｴｱ流量ﾓﾆﾀ対応,ｼﾝﾎﾞﾙ置換え | | |
| | ~ | | | ﾊﾟｯｹｰｼﾞC/V INV化 | D4 | 平野 |

備考 APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019-12-25 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM (MAIN CIRCUIT) | |
| 設計 DESIGNED | 2011-11-28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-D4 | 406 |
| 製図 DRAWN | 2011-11-28 | M.YOSHIDA | サイズ SIZE | 2 | | | |

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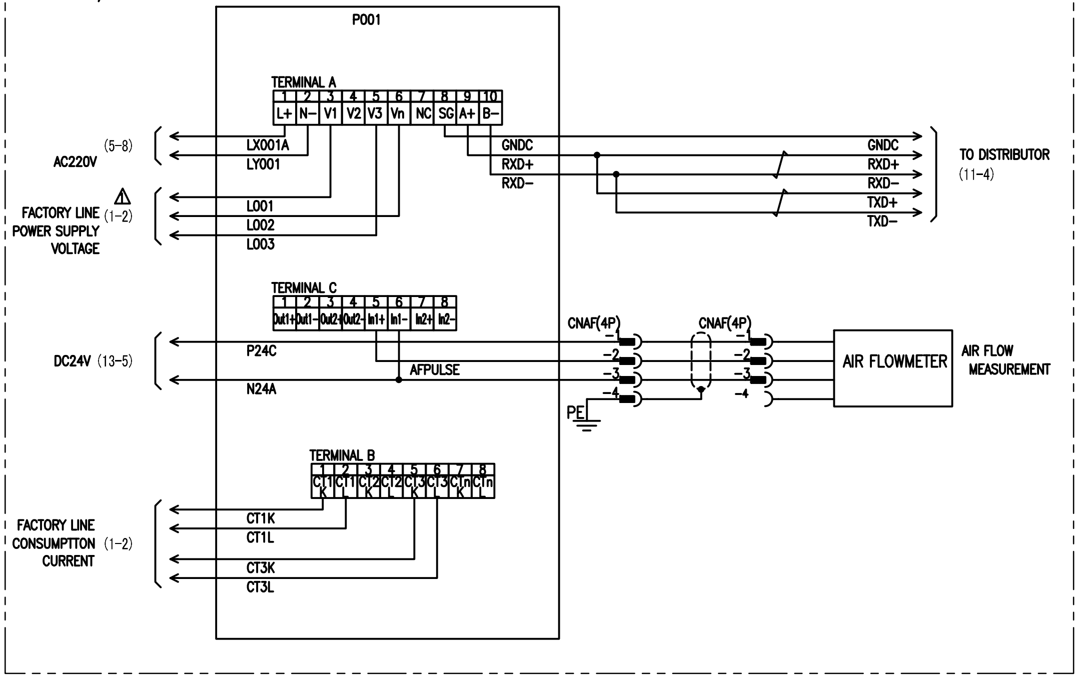
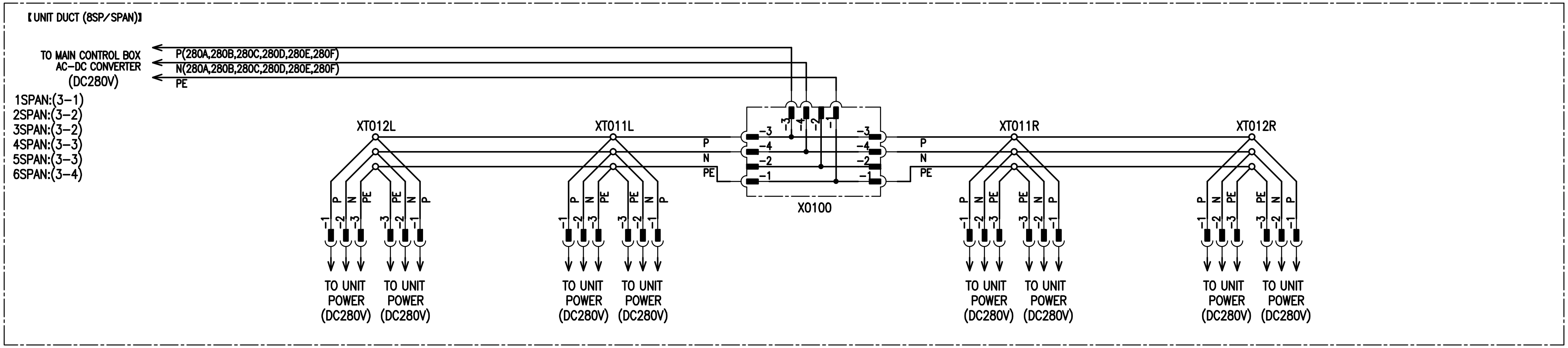
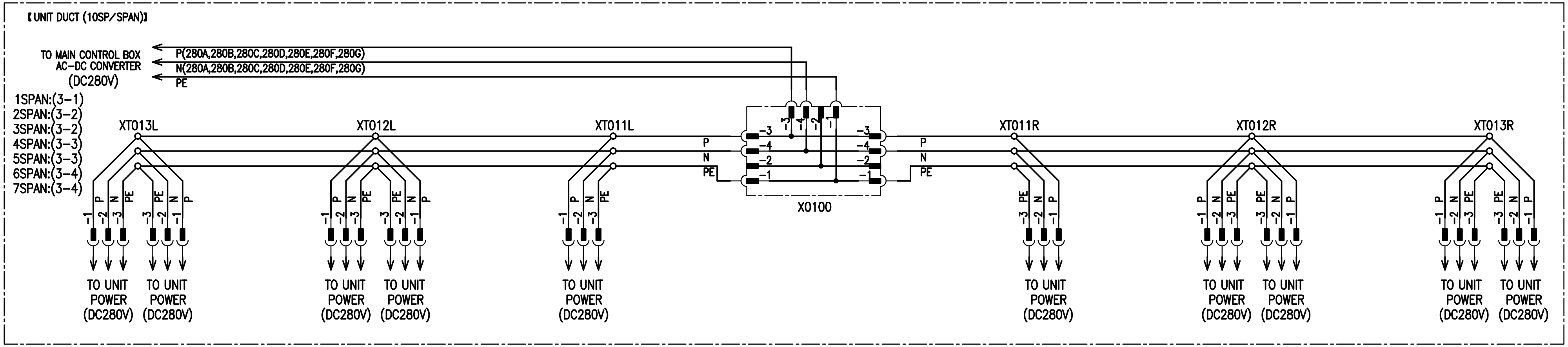
## 【WATT/AIR FLOWMETER】

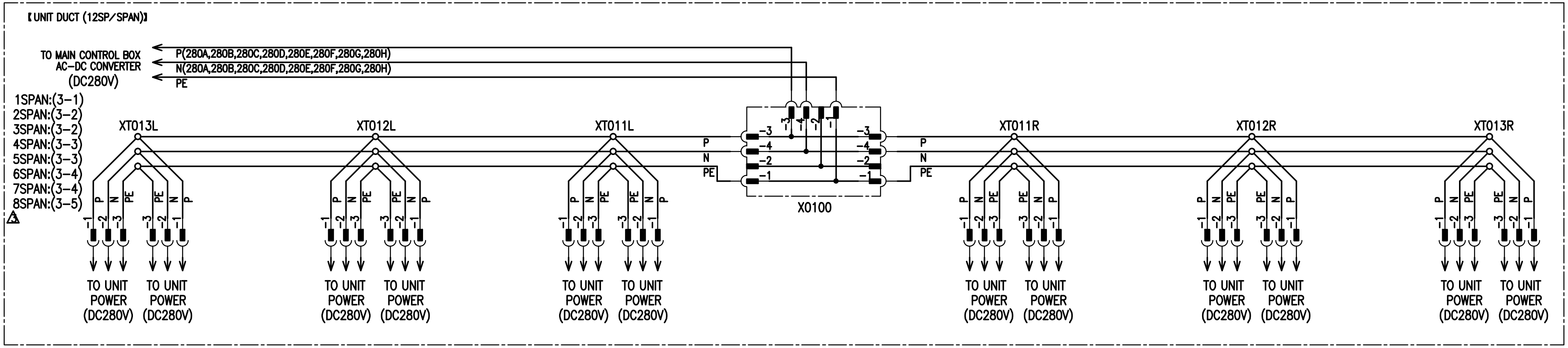

P001
TERMINAL A
1 2 3 4 5 6 7 8 9 10
L+ N− V1 V2 V3 Vn NC SG A+ B−
AC220V (5-8)
LX001A
LY001
FACTORY LINE POWER SUPPLY VOLTAGE ⚠ (1-2)
L001
L002
L003
GNDC
RXD+
RXD−
GNDC
RXD+
RXD−
TXD+
TXD−
TO DISTRIBUTOR (11-4)
TERMINAL C
1 2 3 4 5 6 7 8
Out1+ Out1− Out2+ Out2− In1+ In1− In2+ In2−
DC24V (13-5)
P24C
AFPULSE
N24A
CNAF(4P)
−1 −2 −3 −4
PE
CNAF(4P)
−1 −2 −3 −4
AIR FLOWMETER
AIR FLOW MEASUREMENT
TERMINAL B
1 2 3 4 5 6 7 8
CT1 K CT1 L CT2 K CT2 L CT3 K CT3 L CTn K CTn L
FACTORY LINE CONSUMPTTON CURRENT (1-2)
CT1K
CT1L
CT3K
CT3L

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | | 備考<br>APPENDIX |
| | ~ | | | | | | | ~ | | | | | | |
| ⚠1 | ~ | 19-10-18 | | アドレス修正 | P0 | 平野 | | ~ | | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CA | 名称<br>NAME | SEQUENCE DIAGRAM<br>(MAIN CIRCUIT) | |
| 検図<br>CHECKED | 2019 - 10 - 18 | K.KAWAMOTO | | | | | |
| 設計<br>DESIGNED | 2018 - 10 - 23 | K.HIRANO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CA-QA01B-P0 | 001 |
| 製図<br>DRAWN | 2018 - 10 - 23 | M.YOSHIDA | サイズ<br>SIZE | 2 | | | |


【UNIT DUCT (8SP/SPAN)】
TO MAIN CONTROL BOX
AC-DC CONVERTER
(DC280V)
P(280A,280B,280C,280D,280E,280F)
N(280A,280B,280C,280D,280E,280F)
PE
1SPAN:(3-1)
2SPAN:(3-2)
3SPAN:(3-2)
4SPAN:(3-3)
5SPAN:(3-3)
6SPAN:(3-4)
XT012L
XT011L
X0100
XT011R
XT012R
P
N
PE
-1
-2
-3
-4
TO UNIT POWER (DC280V)


【UNIT DUCT (10SP/SPAN)】
TO MAIN CONTROL BOX
AC-DC CONVERTER
(DC280V)
P(280A,280B,280C,280D,280E,280F,280G)
N(280A,280B,280C,280D,280E,280F,280G)
PE
1SPAN:(3-1)
2SPAN:(3-2)
3SPAN:(3-2)
4SPAN:(3-3)
5SPAN:(3-3)
6SPAN:(3-4)
7SPAN:(3-4)
XT013L
XT012L
XT011L
X0100
XT011R
XT012R
XT013R
P
N
PE
-1
-2
-3
-4
TO UNIT POWER (DC280V)


【UNIT DUCT (12SP/SPAN)】
TO MAIN CONTROL BOX
AC-DC CONVERTER
(DC280V)
P(280A,280B,280C,280D,280E,280F,280G,280H)
N(280A,280B,280C,280D,280E,280F,280G,280H)
PE
1SPAN:(3-1)
2SPAN:(3-2)
3SPAN:(3-2)
4SPAN:(3-3)
5SPAN:(3-3)
6SPAN:(3-4)
7SPAN:(3-4)
8SPAN:(3-5)
3
XT013L
XT012L
XT011L
X0100
XT011R
XT012R
XT013R
P
N
PE
-1
-2
-3
-4
TO UNIT POWER (DC280V)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ～ | 19-02-22 |  | 8SPAN追加 | E2 | 平野 |  | ～ |  |  |  |  |  |
| 2 | a～d | 15-06-26 |  | 7SPAN追加 | E1 | 福沢 |  | ～ |  |  |  |  |  |
| 1 | a～c | 12-02-10 |  | ピン番号誤記修正 | E0 | 伊藤 |  | ～ |  |  |  |  |  |

APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| CHECKED | 2019 - 02 - 22 | K.KAWAMOTO | MACHINE | 9CA | NAME | SEQUENCE DIAGRAM<br>(UNIT DUCT(DC280V LINE)) |
| DESIGNED | 2011 - 11 - 28 | M.ITO | SCALE |  | DRW.NO | 9CA-QA01B-E2 |
| DRAWN | 2011 - 11 - 28 | M.YOSHIDA | サイズ SIZE | 2 |  | 203 |

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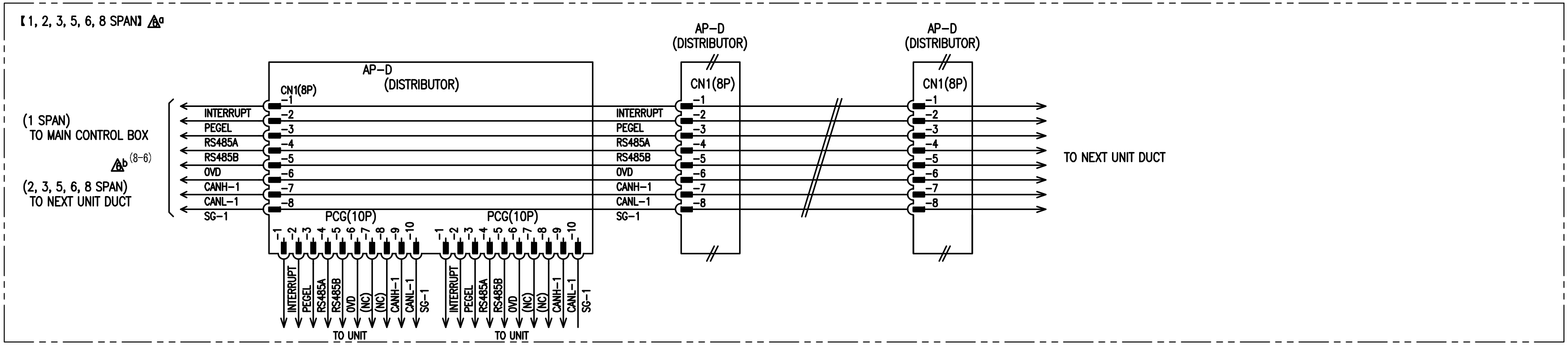
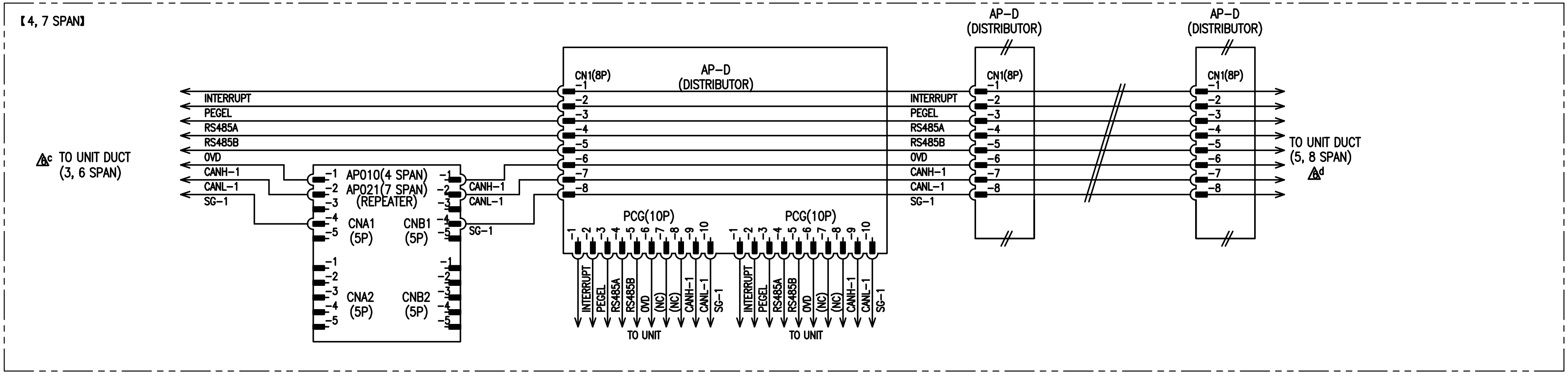
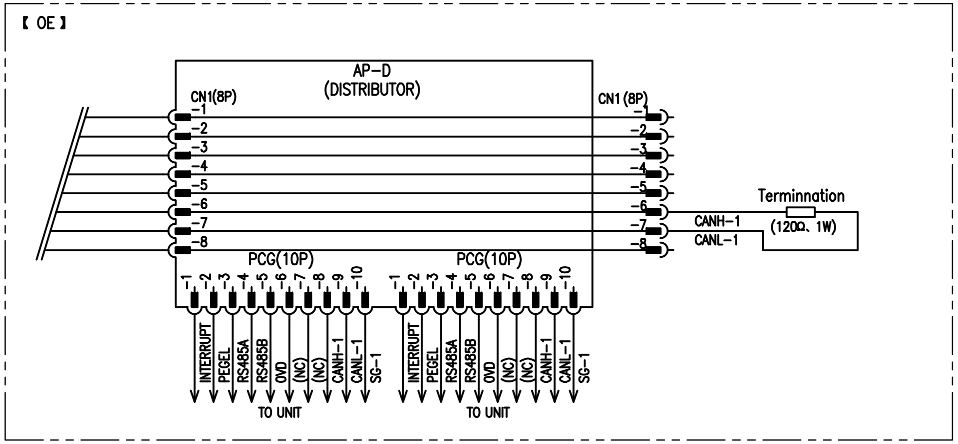

【1, 2, 3, 5, 6, 8 SPAN】 a
AP-D
(DISTRIBUTOR)
CN1(8P)
(1 SPAN)
TO MAIN CONTROL BOX
b (8-6)
(2, 3, 5, 6, 8 SPAN)
TO NEXT UNIT DUCT
INTERRUPT
PEGEL
RS485A
RS485B
OVD
CANH-1
CANL-1
SG-1
-1
-2
-3
-4
-5
-6
-7
-8
PCG(10P)
PCG(10P)
(NC)
TO UNIT
TO UNIT
TO NEXT UNIT DUCT


【4, 7 SPAN】
c TO UNIT DUCT
(3, 6 SPAN)
INTERRUPT
PEGEL
RS485A
RS485B
OVD
CANH-1
CANL-1
SG-1
AP010(4 SPAN)
AP021(7 SPAN)
(REPEATER)
CNA1
(5P)
CNB1
(5P)
CNA2
(5P)
CNB2
(5P)
AP-D
(DISTRIBUTOR)
CN1(8P)
PCG(10P)
(NC)
TO UNIT
TO UNIT
TO UNIT DUCT
(5, 8 SPAN)
d

<SWITCH AND JUMPER SETTING ON PRINTED CIRCUIT BOARD>

| REPEATER<br>AP010(4 SPAN)<br>AP021(7 SPAN) | | |
|---|---|---|
| SW1 | 1 | ON |
| | 2 | ON |
| | 3 | ON |
| | 4 | ON |
| SW2 | 1 | ON |
| | 2 | ON |
| | 3 | ON |
| | 4 | ON |
| SW3 | 1 | OFF |
| | 2 | OFF |
| | 3 | OFF |
| | 4 | OFF |
| JP1 | | ON |
| JP2 | | OFF |
| JP3 | | ON |
| JP4 | | OFF |


【 OE 】
AP-D
(DISTRIBUTOR)
CN1(8P)
CN1 (8P)
-1
-2
-3
-4
-5
-6
-7
-8
Terminnation
(120Ω, 1W)
CANH-1
CANL-1
PCG(10P)
PCG(10P)
INTERRUPT
PEGEL
RS485A
RS485B
OVD
(NC)
CANH-1
CANL-1
SG-1
TO UNIT
TO UNIT

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | a~d | 18-08-21 | | CAN通信不具合対応,AP-D CN1変更<br>シンボル置換え,誤記修正 | F2 | 平野 | | | | | | | |
| 3 | a~f | 15-06-26 | | AP021(7SPAN)追加 | F1 | 福沢 | | ~ | | | | | |
| 2 | a~g | 12-10-02 | | 電気記号追加 | F0 | 福沢 | 6 | a~d | 19-02-22 | | 8スパン対応 | F3 | 平野 |
| 1 | ~ | 12-02-10 | | OE終端抵抗回路追加 | F0 | 伊藤 | 5 | ~ | 18-10-23 | | CAD機能置換え | F2 | 平野 |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2019 - 02 - 22 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(UNIT DUCT(COM, LINE)) |
| DESIGNED | 2011 - 11 - 28 | M.ITO | SCALE | | 図番 DRW.NO | 9CA-QA01B-F3 |
| DRAWN | 2011 - 11 - 28 | M.YOSHIDA | サイズ SIZE | 2 | | 306 |

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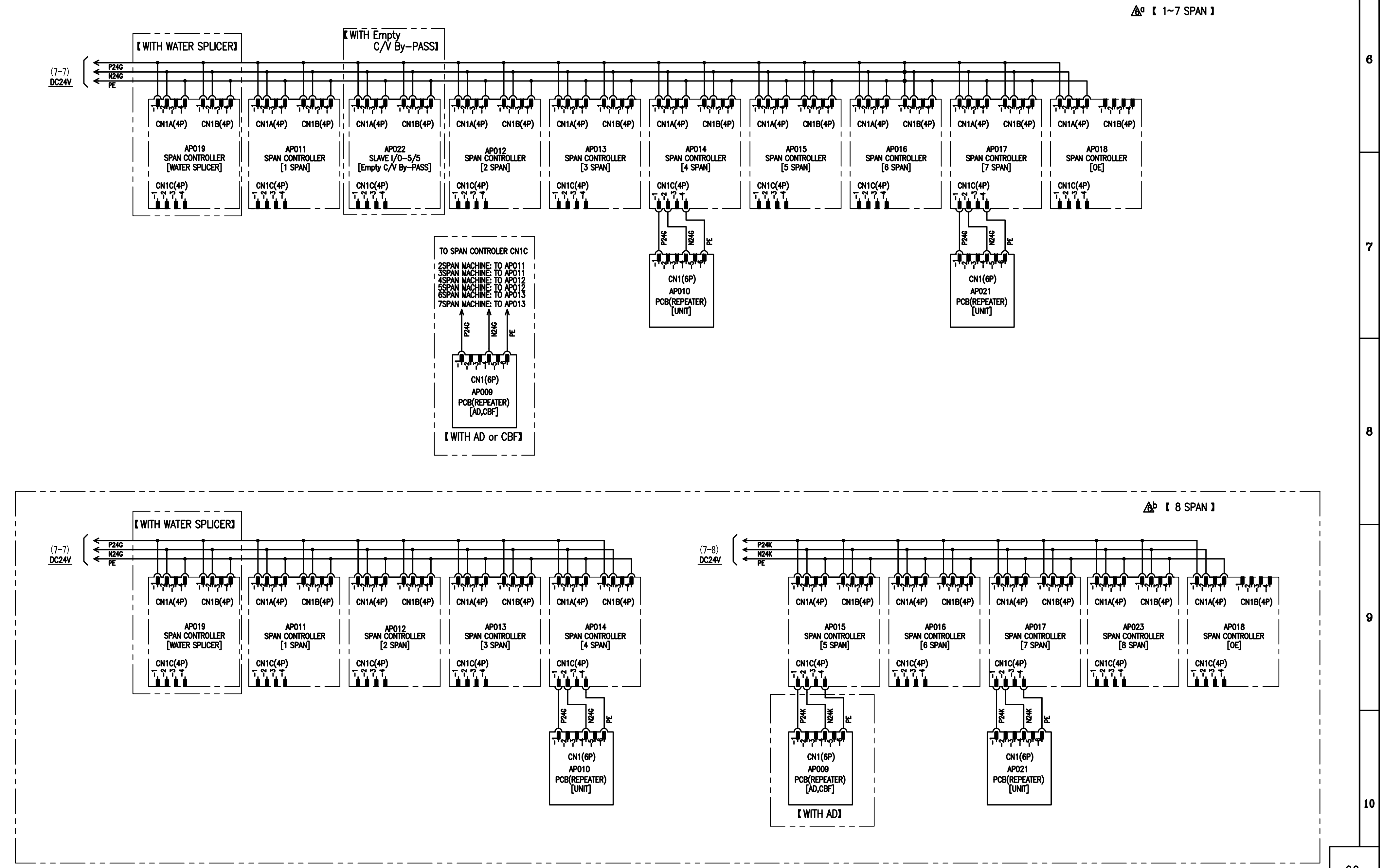
muratec MURATA MACHINERY, LTD.



a 【 1~7 SPAN 】
【WITH WATER SPLICER】
【WITH Empty C/V By-PASS】
(7-7) DC24V
P24G
N24G
PE
CN1A(4P)
CN1B(4P)
CN1C(4P)
AP019 SPAN CONTROLLER [WATER SPLICER]
AP011 SPAN CONTROLLER [1 SPAN]
AP022 SLAVE I/O-5/5 [Empty C/V By-PASS]
AP012 SPAN CONTROLLER [2 SPAN]
AP013 SPAN CONTROLLER [3 SPAN]
AP014 SPAN CONTROLLER [4 SPAN]
AP015 SPAN CONTROLLER [5 SPAN]
AP016 SPAN CONTROLLER [6 SPAN]
AP017 SPAN CONTROLLER [7 SPAN]
AP018 SPAN CONTROLLER [OE]
CN1(6P)
AP010 PCB(REPEATER) [UNIT]
AP021 PCB(REPEATER) [UNIT]
TO SPAN CONTROLER CN1C
2SPAN MACHINE: TO AP011
3SPAN MACHINE: TO AP011
4SPAN MACHINE: TO AP012
5SPAN MACHINE: TO AP012
6SPAN MACHINE: TO AP013
7SPAN MACHINE: TO AP013
AP009 PCB(REPEATER) [AD,CBF]
【WITH AD or CBF】
b 【 8 SPAN 】
(7-8) DC24V
P24K
N24K
AP023 SPAN CONTROLLER [8 SPAN]
AP009 PCB(REPEATER) [AD,CBF]
【WITH AD】
1
2
3
4
5
6
7
8
9
10

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~d | 15-06-26 | | AP017,AP021追加 | G2 | 福沢 | 6 | a~b | 19-02-22 | | 8スパン対応 | G4 | 平野 |
| 2 | ~ | 12-03-28 | | ウォータースプライサー仕様回路修正 | G1 | 伊藤 | 5 | ~ | 18-10-23 | | CAD機能対応 | G3 | 平野 |
| 1 | ~ | 12-02-13 | | 図面名称変更 | G0 | 伊藤 | 4 | ~ | 16-12-22 | | AP022追加,シンボル置換え | G3 | 平野 |

備考 APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019-02-22 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(UNIT DUCT(PCB POWER)) | |
| 設計 DESIGNED | 2011-11-28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-G4 | 406 |
| 製図 DRAWN | 2011-11-28 | M.YOSHIDA | サイズ SIZE | 2 | | | |

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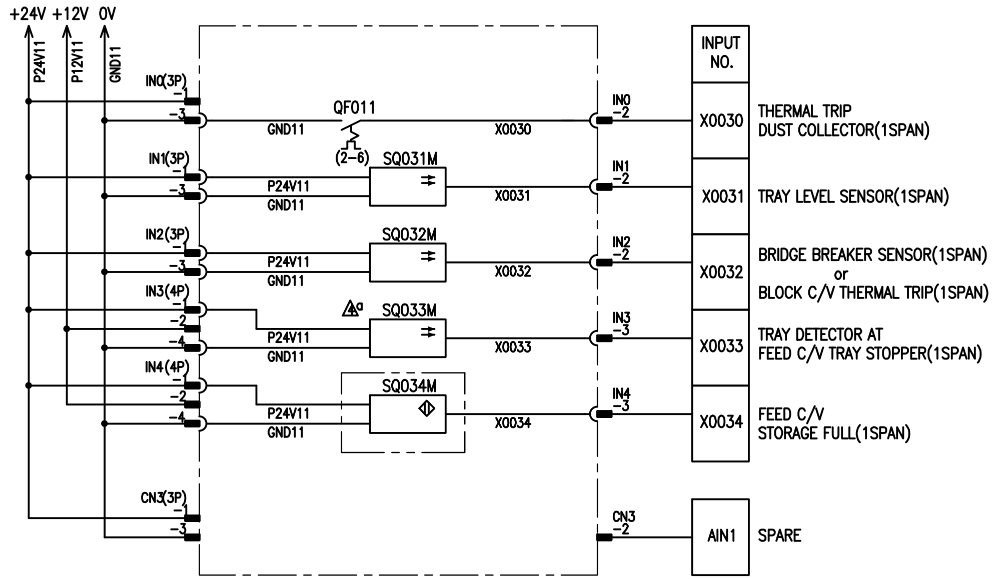
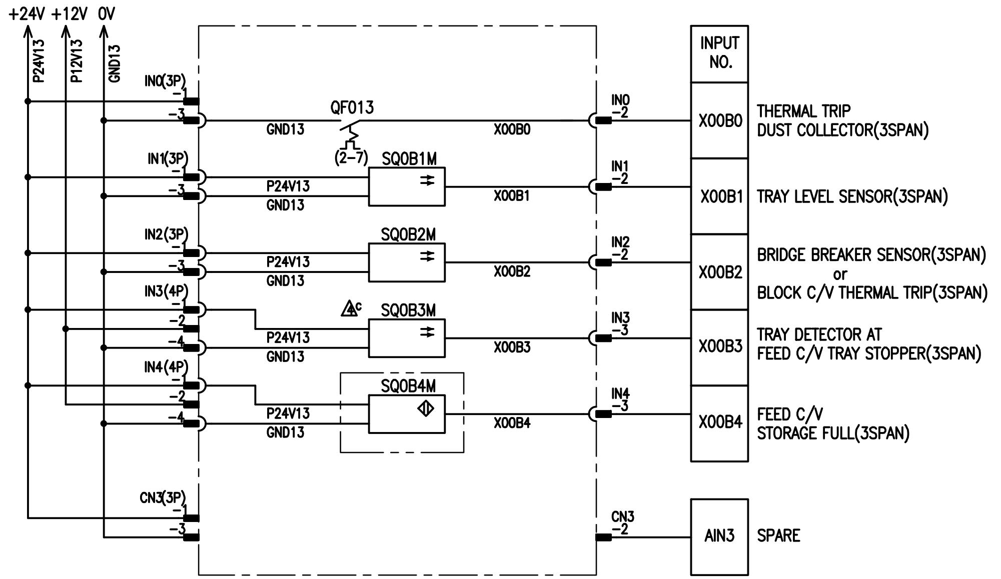
## <SPAN CONTROLLER(1SPAN)>


+24V +12V 0V
P24V11
P12V11
GND11
IN0(3P)
QF011
(2-6)
GND11
X0030
IN0 -2
IN1(3P)
SQ031M
P24V11
GND11
X0031
IN1 -2
IN2(3P)
SQ032M
X0032
IN2 -2
IN3(4P)
SQ033M
X0033
IN3 -3
IN4(4P)
SQ034M
X0034
IN4 -3
CN3(3P)
CN3 -2
INPUT NO.
X0030 THERMAL TRIP DUST COLLECTOR(1SPAN)
X0031 TRAY LEVEL SENSOR(1SPAN)
X0032 BRIDGE BREAKER SENSOR(1SPAN) or BLOCK C/V THERMAL TRIP(1SPAN)
X0033 TRAY DETECTOR AT FEED C/V TRAY STOPPER(1SPAN)
X0034 FEED C/V STORAGE FULL(1SPAN)
AIN1 SPARE

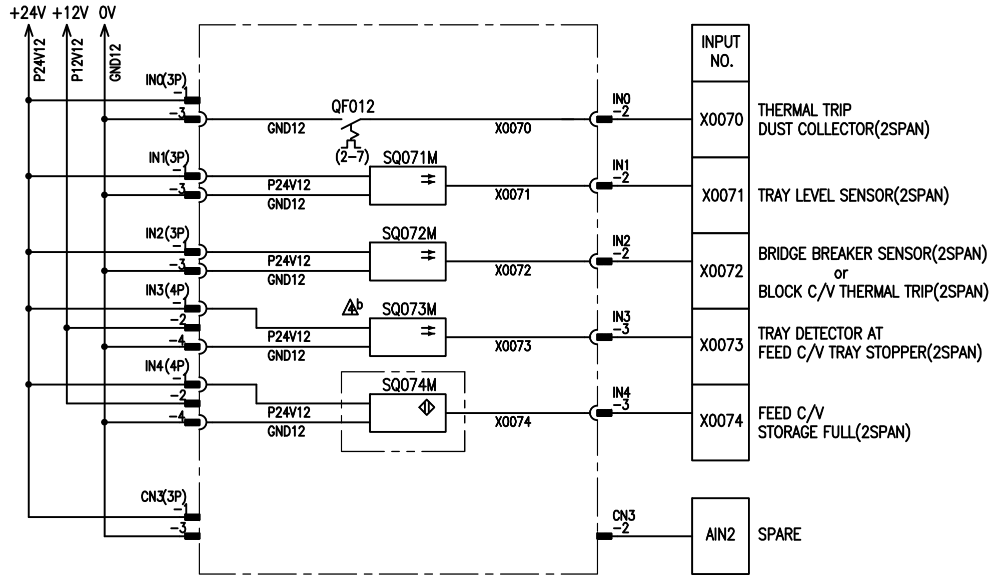
AP011
SPAN CONTROLLER(1SPAN)

## <SPAN CONTROLLER(3SPAN)>


+24V +12V 0V
P24V13
P12V13
GND13
IN0(3P)
QF013
(2-7)
GND13
X00B0
IN0 -2
IN1(3P)
SQ0B1M
P24V13
GND13
X00B1
IN1 -2
IN2(3P)
SQ0B2M
X00B2
IN2 -2
IN3(4P)
SQ0B3M
X00B3
IN3 -3
IN4(4P)
SQ0B4M
X00B4
IN4 -3
CN3(3P)
CN3 -2
INPUT NO.
X00B0 THERMAL TRIP DUST COLLECTOR(3SPAN)
X00B1 TRAY LEVEL SENSOR(3SPAN)
X00B2 BRIDGE BREAKER SENSOR(3SPAN) or BLOCK C/V THERMAL TRIP(3SPAN)
X00B3 TRAY DETECTOR AT FEED C/V TRAY STOPPER(3SPAN)
X00B4 FEED C/V STORAGE FULL(3SPAN)
AIN3 SPARE

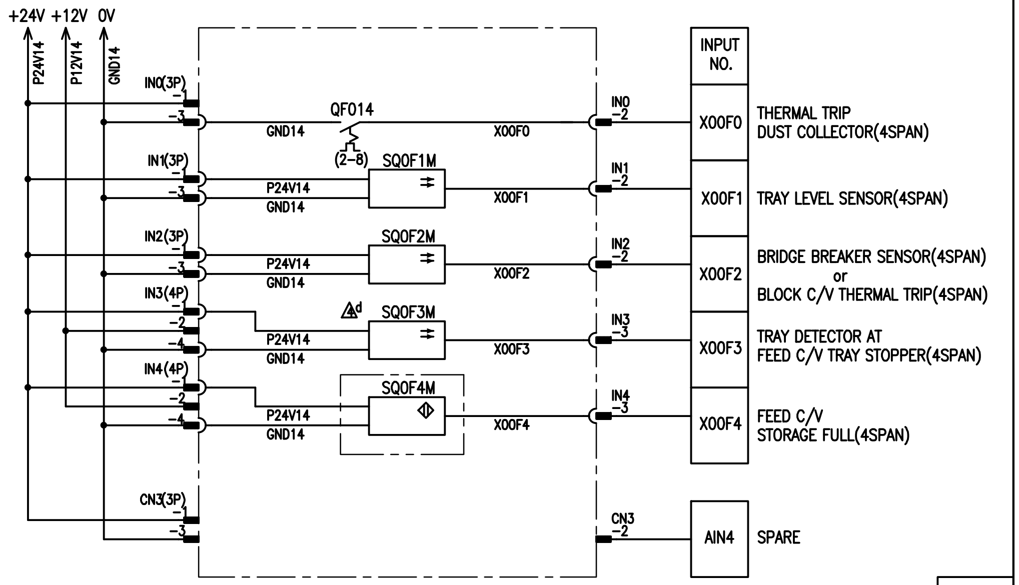
AP013
SPAN CONTROLLER(3SPAN)

## <SPAN CONTROLLER(2SPAN)>


+24V +12V 0V
P24V12
P12V12
GND12
IN0(3P)
QF012
(2-7)
GND12
X0070
IN0 -2
IN1(3P)
SQ071M
P24V12
GND12
X0071
IN1 -2
IN2(3P)
SQ072M
X0072
IN2 -2
IN3(4P)
SQ073M
X0073
IN3 -3
IN4(4P)
SQ074M
X0074
IN4 -3
CN3(3P)
CN3 -2
INPUT NO.
X0070 THERMAL TRIP DUST COLLECTOR(2SPAN)
X0071 TRAY LEVEL SENSOR(2SPAN)
X0072 BRIDGE BREAKER SENSOR(2SPAN) or BLOCK C/V THERMAL TRIP(2SPAN)
X0073 TRAY DETECTOR AT FEED C/V TRAY STOPPER(2SPAN)
X0074 FEED C/V STORAGE FULL(2SPAN)
AIN2 SPARE

AP012
SPAN CONTROLLER(2SPAN)

## <SPAN CONTROLLER(4SPAN)>


+24V +12V 0V
P24V14
P12V14
GND14
IN0(3P)
QF014
(2-8)
GND14
X00F0
IN0 -2
IN1(3P)
SQ0F1M
P24V14
GND14
X00F1
IN1 -2
IN2(3P)
SQ0F2M
X00F2
IN2 -2
IN3(4P)
SQ0F3M
X00F3
IN3 -3
IN4(4P)
SQ0F4M
X00F4
IN4 -3
CN3(3P)
CN3 -2
INPUT NO.
X00F0 THERMAL TRIP DUST COLLECTOR(4SPAN)
X00F1 TRAY LEVEL SENSOR(4SPAN)
X00F2 BRIDGE BREAKER SENSOR(4SPAN) or BLOCK C/V THERMAL TRIP(4SPAN)
X00F3 TRAY DETECTOR AT FEED C/V TRAY STOPPER(4SPAN)
X00F4 FEED C/V STORAGE FULL(4SPAN)
AIN4 SPARE

AP014
SPAN CONTROLLER(4SPAN)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~d | 16-12-22 |  | フィードC/V満杯センサ追加,シンボル置換え | H2 | 平野 |  | ~ |  |  |  |  |  |
| 2 | a~d | 12-03-29 |  | 電気記号変更 | H1 | 伊藤 |  | ~ |  |  |  |  |  |
| 1 | ~ | 12-02-13 |  | 図面名称修正 | H0 | 伊藤 | 4 | a~d | 18-11-20 |  | ﾌｨｰﾄﾞC/Vﾄﾚｰｽﾄｯﾊﾟｰ用ｾﾝｻ追加 | H3 | 平野 |

備考 APPENDIX

| | | |
|---|---|---|
| 検図 CHECKED | 2018-11-20 | K.KAWAMOTO |
| 設計 DESIGNED | 2011-11-28 | M.ITO |
| 製図 DRAWN | 2011-11-28 | M.YOSHIDA |

| | | | |
|---|---|---|---|
| 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(SPAN CONTROLLER INPUT) |
| 尺度 SCALE |  | 図番 DRW.NO | 9CA-QA01B-H3 |
| サイズ SIZE | 2 |  | 304 |

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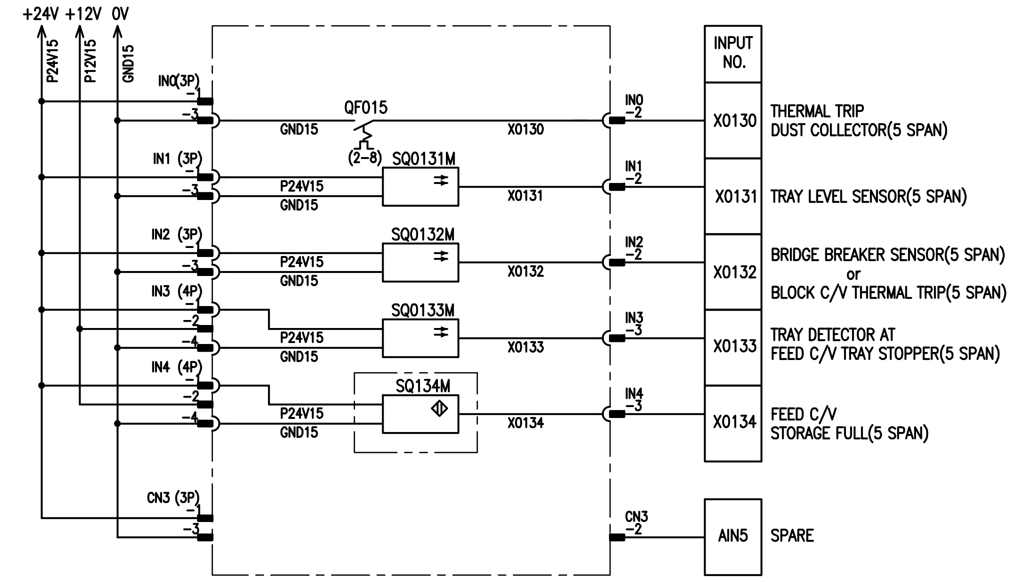
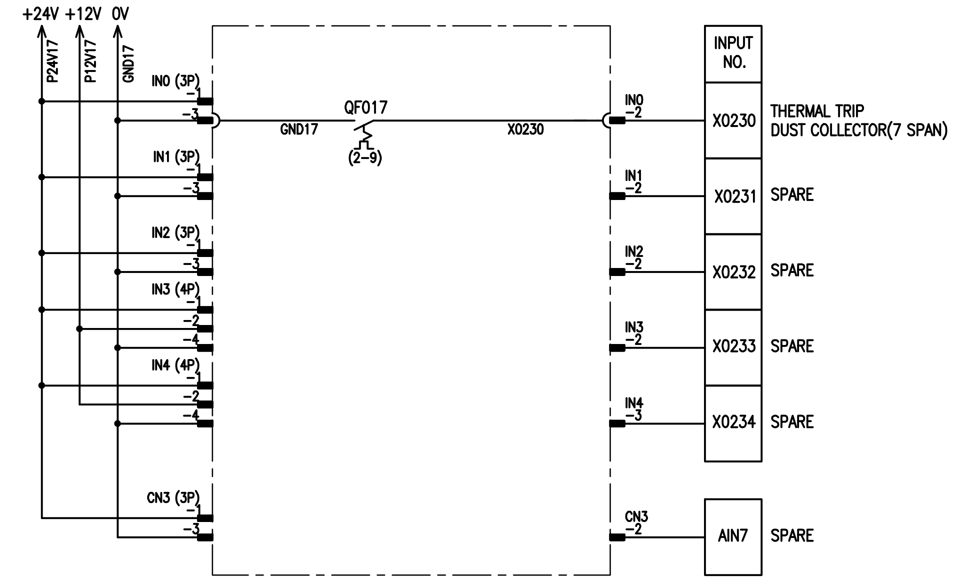
## <SPAN CONTROLLER(5 SPAN)>


+24V +12V 0V
P24V15
P12V15
GND15
IN0(3P)
-1
-3
QF015
GND15
(2-8)
X0130
IN0 -2
IN1 (3P)
SQ0131M
P24V15
GND15
X0131
IN1 -2
IN2 (3P)
SQ0132M
X0132
IN2 -2
IN3 (4P)
-2
-4
SQ0133M
X0133
IN3 -3
IN4 (4P)
SQ134M
X0134
IN4 -3
CN3 (3P)
CN3 -2
INPUT NO.
X0130
THERMAL TRIP
DUST COLLECTOR(5 SPAN)
X0131
TRAY LEVEL SENSOR(5 SPAN)
X0132
BRIDGE BREAKER SENSOR(5 SPAN)
or
BLOCK C/V THERMAL TRIP(5 SPAN)
X0133
TRAY DETECTOR AT
FEED C/V TRAY STOPPER(5 SPAN)
X0134
FEED C/V
STORAGE FULL(5 SPAN)
AIN5
SPARE

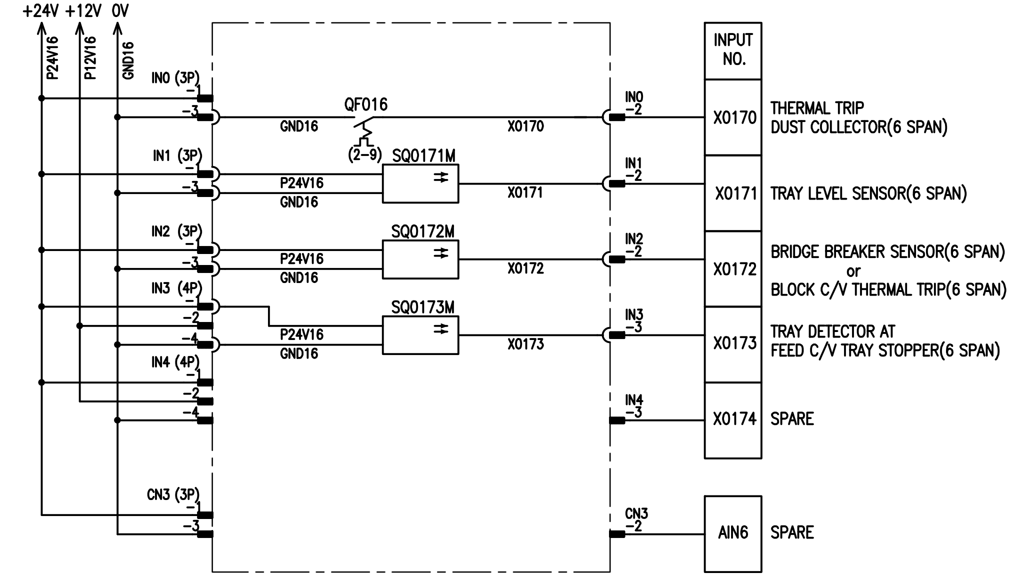
AP015
SPAN CONTROLLER(5 SPAN)

## <SPAN CONTROLLER(7 SPAN)> △a【FOR M/G TYPE】


+24V +12V 0V
P24V17
P12V17
GND17
IN0 (3P)
-1
-3
QF017
GND17
(2-9)
X0230
IN0 -2
IN1 (3P)
IN1 -2
IN2 (3P)
IN2 -2
IN3 (4P)
-2
-4
IN3 -2
IN4 (4P)
IN4 -3
CN3 (3P)
CN3 -2
INPUT NO.
X0230
THERMAL TRIP
DUST COLLECTOR(7 SPAN)
X0231
SPARE
X0232
SPARE
X0233
SPARE
X0234
SPARE
AIN7
SPARE

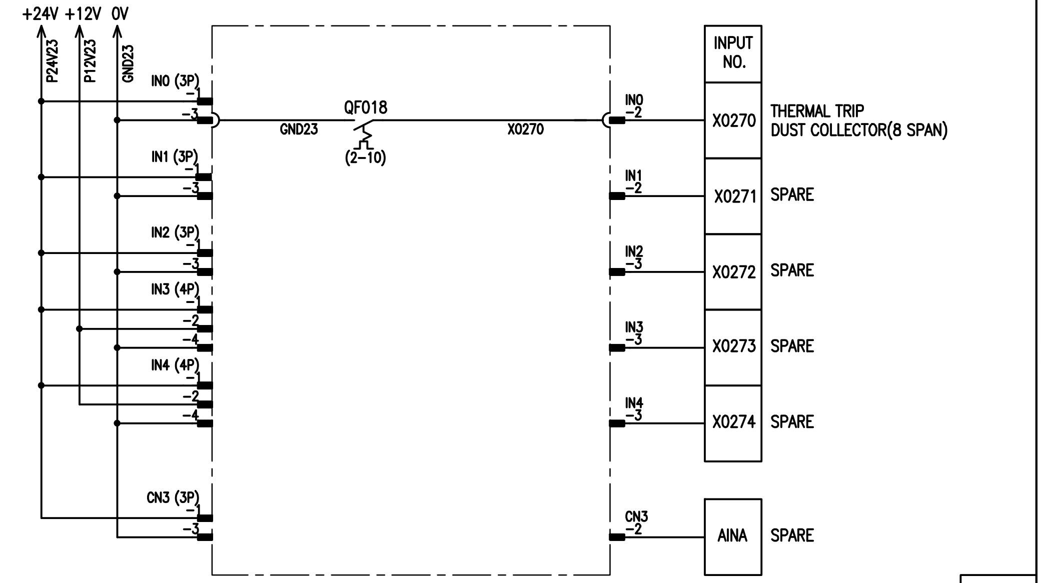
AP017
SPAN CONTROLLER(7 SPAN)

## <SPAN CONTROLLER(6 SPAN)>


+24V +12V 0V
P24V16
P12V16
GND16
IN0 (3P)
-1
-3
QF016
GND16
(2-9)
X0170
IN0 -2
IN1 (3P)
SQ0171M
P24V16
GND16
X0171
IN1 -2
IN2 (3P)
SQ0172M
X0172
IN2 -2
IN3 (4P)
-2
-4
SQ0173M
X0173
IN3 -3
IN4 (4P)
IN4 -3
CN3 (3P)
CN3 -2
INPUT NO.
X0170
THERMAL TRIP
DUST COLLECTOR(6 SPAN)
X0171
TRAY LEVEL SENSOR(6 SPAN)
X0172
BRIDGE BREAKER SENSOR(6 SPAN)
or
BLOCK C/V THERMAL TRIP(6 SPAN)
X0173
TRAY DETECTOR AT
FEED C/V TRAY STOPPER(6 SPAN)
X0174
SPARE
AIN6
SPARE

AP016
SPAN CONTROLLER(6 SPAN)

## <SPAN CONTROLLER(8 SPAN)> △b【FOR M/G TYPE】


+24V +12V 0V
P24V23
P12V23
GND23
IN0 (3P)
-1
-3
QF018
GND23
(2-10)
X0270
IN0 -2
IN1 (3P)
IN1 -2
IN2 (3P)
IN2 -3
IN3 (4P)
-2
-4
IN3 -3
IN4 (4P)
IN4 -3
CN3 (3P)
CN3 -2
INPUT NO.
X0270
THERMAL TRIP
DUST COLLECTOR(8 SPAN)
X0271
SPARE
X0272
SPARE
X0273
SPARE
X0274
SPARE
AINA
SPARE

AP019
SPAN CONTROLLER(8 SPAN)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | 備考 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 15-06-26 | | 7SPAN追加 | J2 | 福沢 | 6 | a~b | 19-05-08 | | 8スパン対応、仕様追記 | J5 | 平野 | APPENDIX |
| 2 | a~b | 12-03-29 | | 電気記号変更 | J1 | 伊藤 | 5 | a~c | 18-11-20 | | フィードC/Vトレーストッパー用センサ追加 | J4 | 平野 | |
| 1 | ~ | 12-02-13 | | 図面名称修正 | J0 | 伊藤 | 4 | ~ | 16-12-22 | | フィードC/V満杯センサ追加,シンボル置換え | J3 | 平野 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHECKED | 2019-05-08 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM<br>(SPAN CONTROLLER INPUT) | |
| DESIGNED | 2011-11-28 | M.ITO | SCALE | | 図番 DRW.NO | 9CA-QA01B-J5 | 506 |
| DRAWN | 2011-11-28 | M.YOSHIDA | SIZE | 2 | | | |

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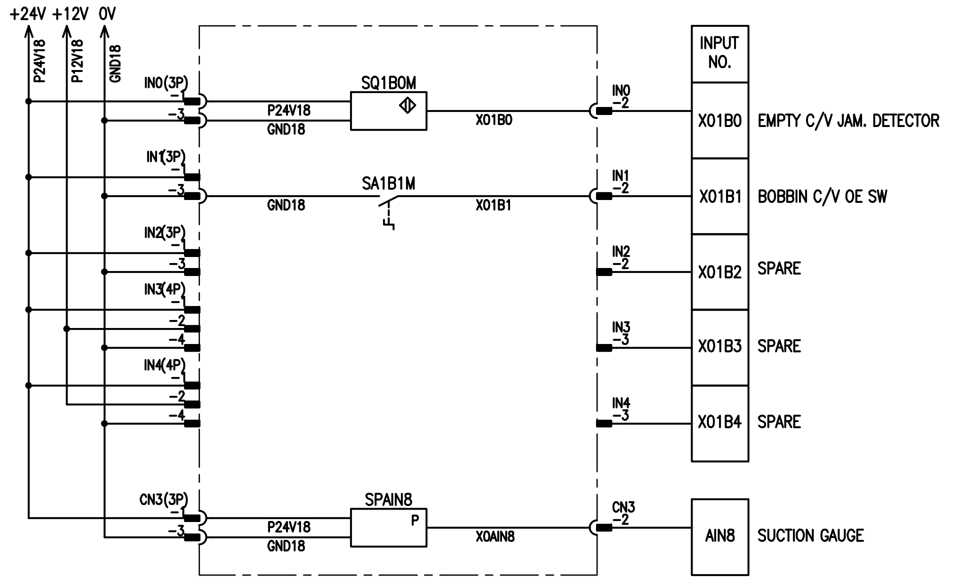
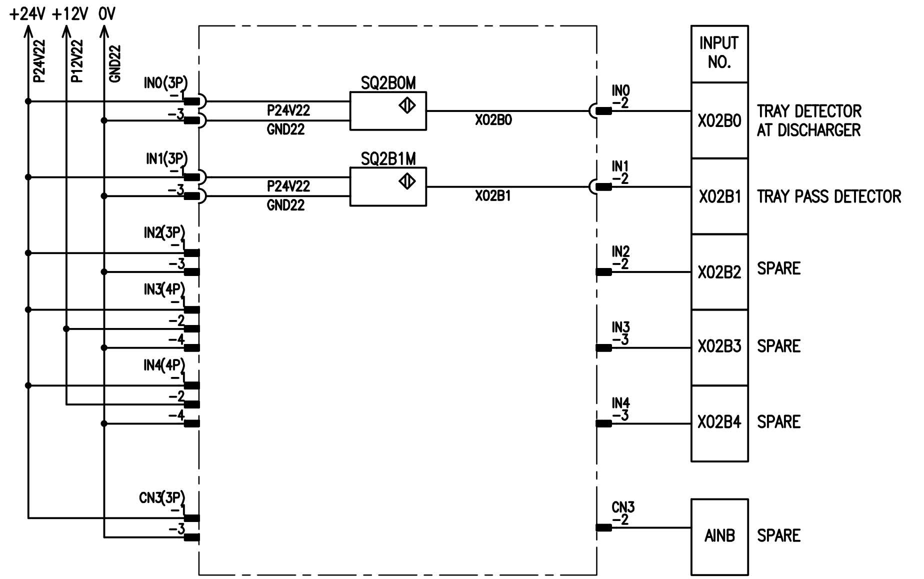
## <SPAN CONTROLLER(OE)>


+24V +12V 0V
P24V18
P12V18
GND18
IN0(3P) -1 -3
SQ1B0M
P24V18
GND18
X01B0
IN0 -2
IN1(3P) -1 -3
SA1B1M
GND18
X01B1
IN1 -2
IN2(3P) -1 -3
IN2 -2
IN3(4P) -1 -2 -4
IN3 -3
IN4(4P) -1 -2 -4
IN4 -3
CN3(3P) -1 -3
SPAIN8
P
P24V18
GND18
X0AIN8
CN3 -2
INPUT NO.
X01B0 EMPTY C/V JAM. DETECTOR
X01B1 BOBBIN C/V OE SW
X01B2 SPARE
X01B3 SPARE
X01B4 SPARE
AIN8 SUCTION GAUGE

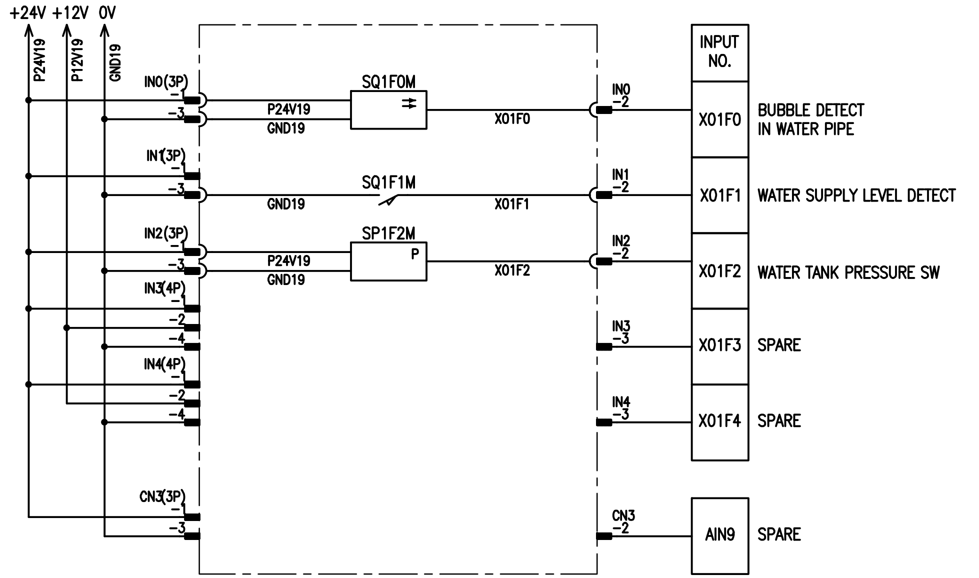
AP018
SPAN CONTROLLER(OE)

## △3 <SLAVE I/O-5/5(Empty C/V By-PASS)>


+24V +12V 0V
P24V22
P12V22
GND22
IN0(3P) -1 -3
SQ2B0M
P24V22
GND22
X02B0
IN0 -2
IN1(3P) -1 -3
SQ2B1M
P24V22
GND22
X02B1
IN1 -2
IN2(3P) -1 -3
IN2 -2
IN3(4P) -1 -2 -4
IN3 -3
IN4(4P) -1 -2 -4
IN4 -3
CN3(3P) -1 -3
CN3 -2
INPUT NO.
X02B0 TRAY DETECTOR AT DISCHARGER
X02B1 TRAY PASS DETECTOR
X02B2 SPARE
X02B3 SPARE
X02B4 SPARE
AINB SPARE

AP022
SLAVE I/O-5/5(Empty C/V By-PASS)

## <SPAN CONTROLLER(WATER SPLICER)>


+24V +12V 0V
P24V19
P12V19
GND19
IN0(3P) -1 -3
SQ1F0M
P24V19
GND19
X01F0
IN0 -2
IN1(3P) -1 -3
SQ1F1M
GND19
X01F1
IN1 -2
IN2(3P) -1 -3
SP1F2M
P
P24V19
GND19
X01F2
IN2 -2
IN3(4P) -1 -2 -4
IN3 -3
IN4(4P) -1 -2 -4
IN4 -3
CN3(3P) -1 -3
CN3 -2
INPUT NO.
X01F0 BUBBLE DETECT IN WATER PIPE
X01F1 WATER SUPPLY LEVEL DETECT
X01F2 WATER TANK PRESSURE SW
X01F3 SPARE
X01F4 SPARE
AIN9 SPARE

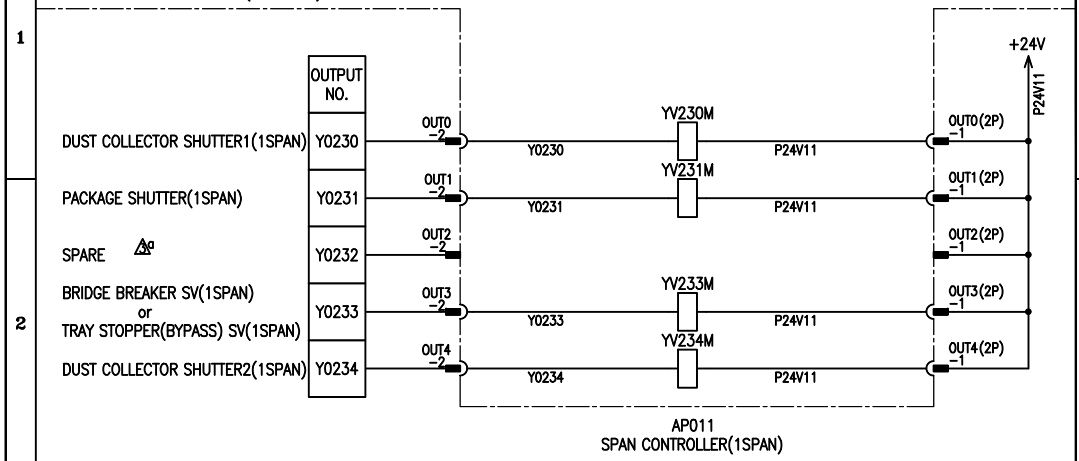
AP019
SPAN CONTROLLER(WATER SPLICER)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 16-12-22 |  | AP022追加,シンボル置換え | K1 | 平野 |  | ~ |  |  |  |  |  |
| 2 | ~ | 12-08-09 |  | 誤記修正 | KO | 福沢 |  | ~ |  |  |  |  |  |
| 1 | ~ | 12-02-13 |  | 図面名称修正 | KO | 伊藤 |  | ~ |  |  |  |  |  |

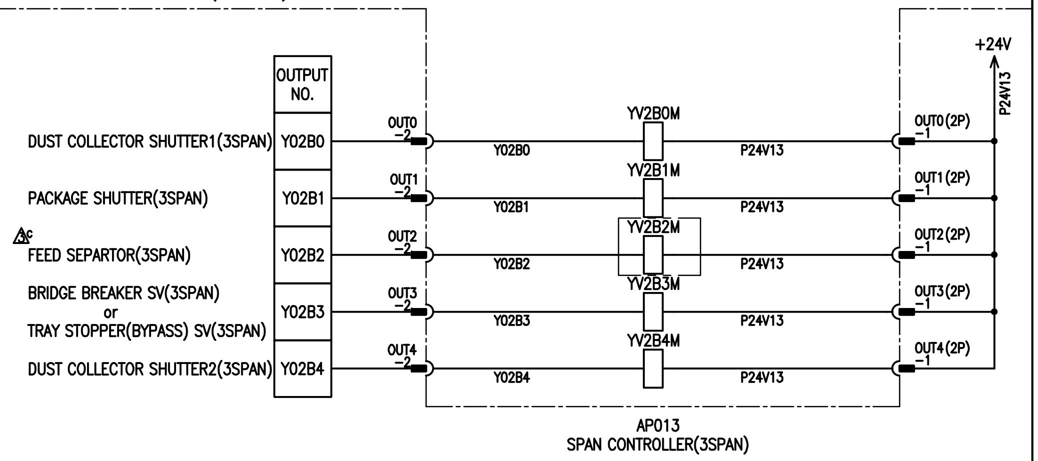
備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CA | 名称<br>NAME | SEQUENCE DIAGRAM<br>(SPAN CONTROLLER INPUT) |
| 検図<br>CHECKED | 2016 -12 -22 | K.KAWAMOTO | | | | |
| 設計<br>DESIGNED | 2011 -11 -28 | M.ITO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CA-QA01B-K1 103 |
| 製図<br>DRAWN | 2011 -11 -28 | M.YOSHIDA | サイズ<br>SIZE | 2 | | Muratec MURATA MACHINERY, LTD. |

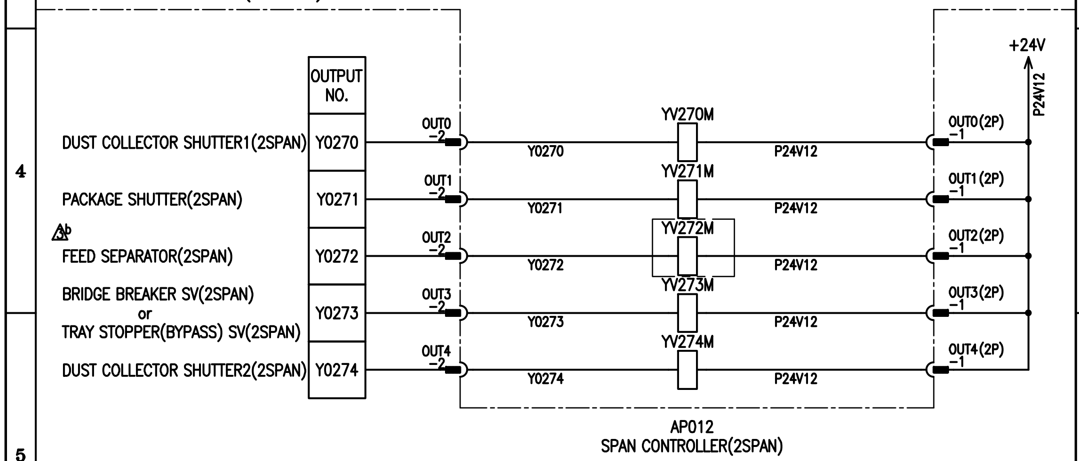
## <SPAN CONTROLLER(1SPAN)>


OUTPUT NO.
DUST COLLECTOR SHUTTER1(1SPAN) Y0230
PACKAGE SHUTTER(1SPAN) Y0231
SPARE a Y0232
BRIDGE BREAKER SV(1SPAN) or TRAY STOPPER(BYPASS) SV(1SPAN) Y0233
DUST COLLECTOR SHUTTER2(1SPAN) Y0234
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
Y0230
Y0231
Y0233
Y0234
YV230M
YV231M
YV233M
YV234M
P24V11
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V11
AP011
SPAN CONTROLLER(1SPAN)

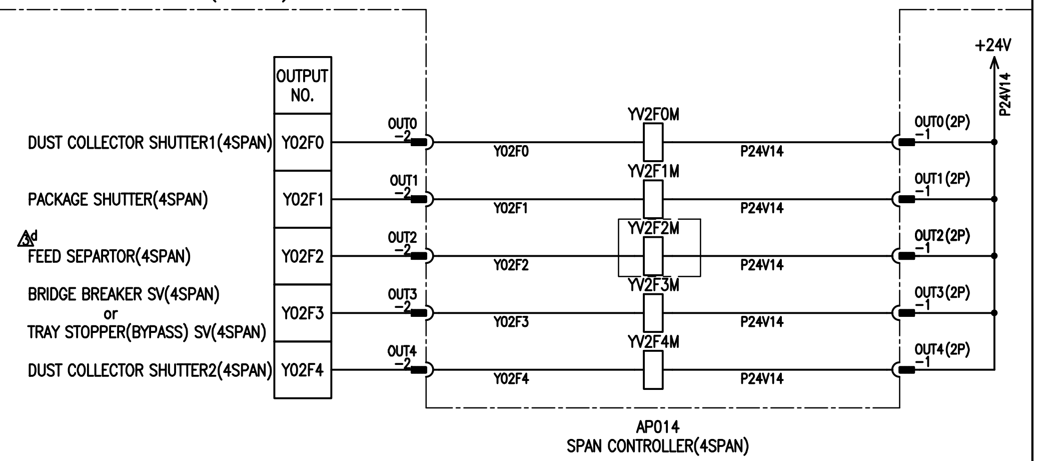
## <SPAN CONTROLLER(3SPAN)>


OUTPUT NO.
DUST COLLECTOR SHUTTER1(3SPAN) Y02B0
PACKAGE SHUTTER(3SPAN) Y02B1
c
FEED SEPARTOR(3SPAN) Y02B2
BRIDGE BREAKER SV(3SPAN) or TRAY STOPPER(BYPASS) SV(3SPAN) Y02B3
DUST COLLECTOR SHUTTER2(3SPAN) Y02B4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
Y02B0
Y02B1
Y02B2
Y02B3
Y02B4
YV2B0M
YV2B1M
YV2B2M
YV2B3M
YV2B4M
P24V13
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V13
AP013
SPAN CONTROLLER(3SPAN)

## <SPAN CONTROLLER(2SPAN)>


OUTPUT NO.
DUST COLLECTOR SHUTTER1(2SPAN) Y0270
PACKAGE SHUTTER(2SPAN) Y0271
b
FEED SEPARATOR(2SPAN) Y0272
BRIDGE BREAKER SV(2SPAN) or TRAY STOPPER(BYPASS) SV(2SPAN) Y0273
DUST COLLECTOR SHUTTER2(2SPAN) Y0274
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
Y0270
Y0271
Y0272
Y0273
Y0274
YV270M
YV271M
YV272M
YV273M
YV274M
P24V12
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V12
AP012
SPAN CONTROLLER(2SPAN)

## <SPAN CONTROLLER(4SPAN)>


OUTPUT NO.
DUST COLLECTOR SHUTTER1(4SPAN) Y02F0
PACKAGE SHUTTER(4SPAN) Y02F1
d
FEED SEPARTOR(4SPAN) Y02F2
BRIDGE BREAKER SV(4SPAN) or TRAY STOPPER(BYPASS) SV(4SPAN) Y02F3
DUST COLLECTOR SHUTTER2(4SPAN) Y02F4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
Y02F0
Y02F1
Y02F2
Y02F3
Y02F4
YV2F0M
YV2F1M
YV2F2M
YV2F3M
YV2F4M
P24V14
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V14
AP014
SPAN CONTROLLER(4SPAN)

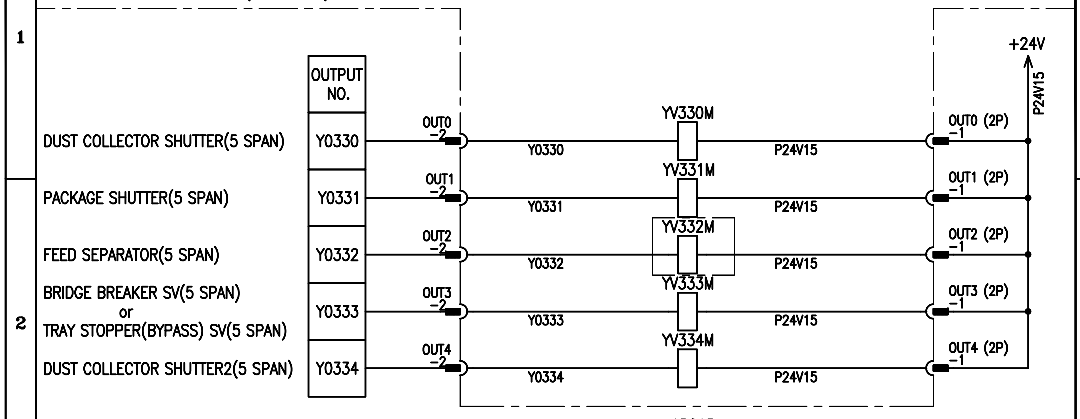
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~d | 16-12-22 | | フィードセパレータ追加,シンボル置換え | L1 | 平野 | | ~ | | | | | |
| 2 | a~d | 12-10-02 | | デバイス説明追記 | L0 | 福沢 | | ~ | | | | | |
| 1 | ~ | 12-02-13 | | 図面名称修正 | L0 | 伊藤 | | ~ | | | | | |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2016 -12 -22 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM (SPAN CONTROLLER OUTPUT) |
| 設計 DESIGNED | 2011 -11 -28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-L1 103 |
| 製図 DRAWN | 2011 -11 -28 | M.YOSHIDA | サイズ SIZE | 2 | | muratec MURATA MACHINERY. LTD. |

A-CAD V4

## <SPAN CONTROLLER(5 SPAN)>

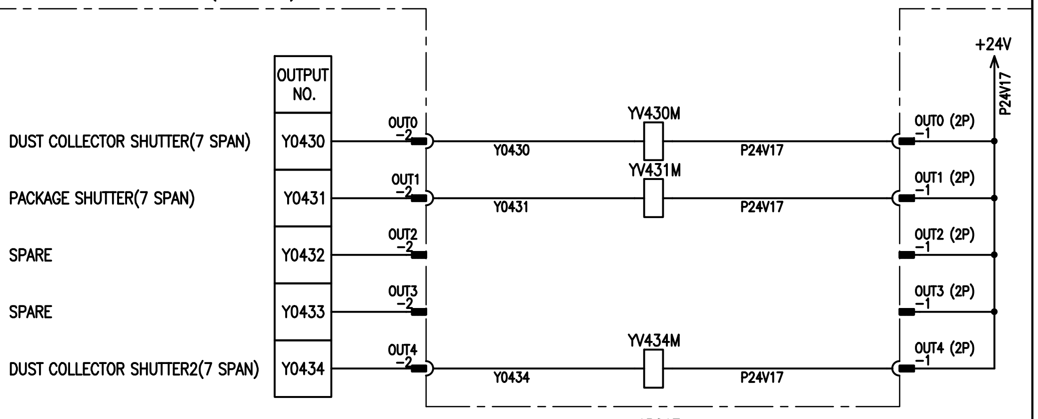


OUTPUT NO.
DUST COLLECTOR SHUTTER(5 SPAN)
Y0330
PACKAGE SHUTTER(5 SPAN)
Y0331
FEED SEPARATOR(5 SPAN)
Y0332
BRIDGE BREAKER SV(5 SPAN)
or
TRAY STOPPER(BYPASS) SV(5 SPAN)
Y0333
DUST COLLECTOR SHUTTER2(5 SPAN)
Y0334
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
YV330M
YV331M
YV332M
YV333M
YV334M
Y0330
Y0331
Y0332
Y0333
Y0334
P24V15
P24V15
P24V15
P24V15
P24V15
OUT0 (2P) -1
OUT1 (2P) -1
OUT2 (2P) -1
OUT3 (2P) -1
OUT4 (2P) -1
+24V
P24V15

AP015
SPAN CONTROLLER(5 SPAN)

【FOR M/G TYPE】

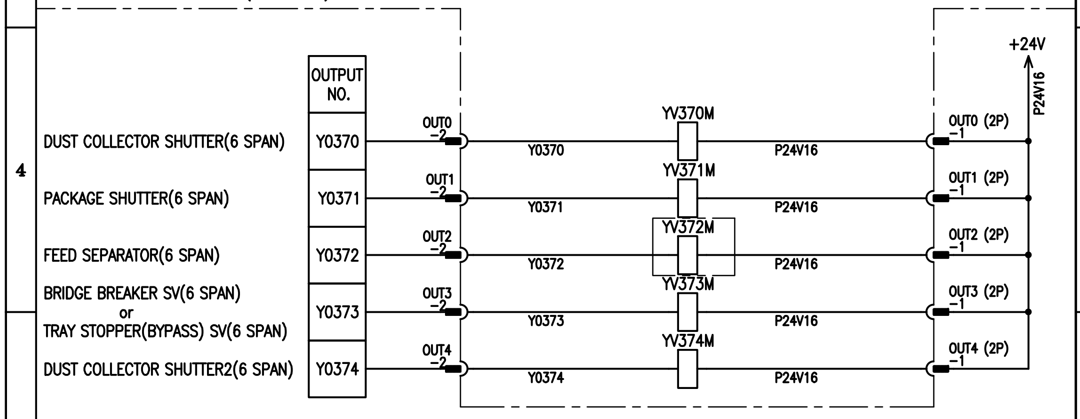
## <SPAN CONTROLLER(7 SPAN)>



OUTPUT NO.
DUST COLLECTOR SHUTTER(7 SPAN)
Y0430
PACKAGE SHUTTER(7 SPAN)
Y0431
SPARE
Y0432
SPARE
Y0433
DUST COLLECTOR SHUTTER2(7 SPAN)
Y0434
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
YV430M
YV431M
YV434M
Y0430
Y0431
Y0434
P24V17
P24V17
P24V17
OUT0 (2P) -1
OUT1 (2P) -1
OUT2 (2P) -1
OUT3 (2P) -1
OUT4 (2P) -1
+24V
P24V17

AP017
SPAN CONTROLLER(7 SPAN)

## <SPAN CONTROLLER(6 SPAN)>

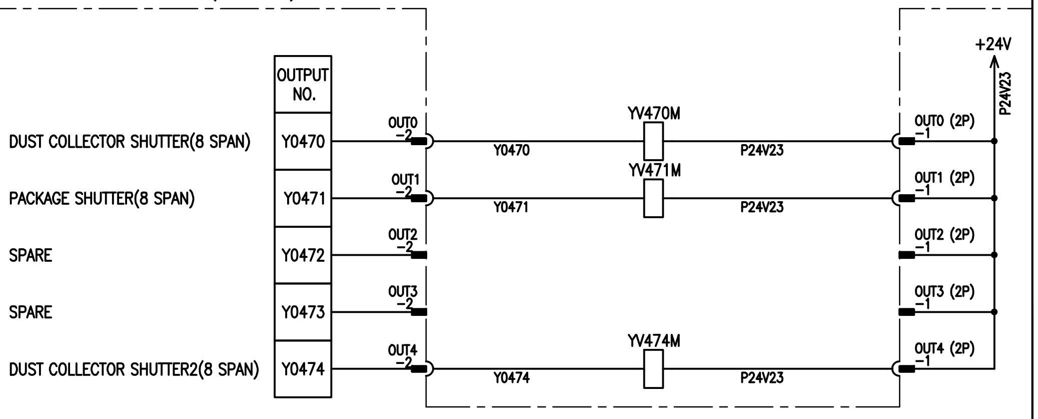


OUTPUT NO.
DUST COLLECTOR SHUTTER(6 SPAN)
Y0370
PACKAGE SHUTTER(6 SPAN)
Y0371
FEED SEPARATOR(6 SPAN)
Y0372
BRIDGE BREAKER SV(6 SPAN)
or
TRAY STOPPER(BYPASS) SV(6 SPAN)
Y0373
DUST COLLECTOR SHUTTER2(6 SPAN)
Y0374
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
YV370M
YV371M
YV372M
YV373M
YV374M
Y0370
Y0371
Y0372
Y0373
Y0374
P24V16
P24V16
P24V16
P24V16
P24V16
OUT0 (2P) -1
OUT1 (2P) -1
OUT2 (2P) -1
OUT3 (2P) -1
OUT4 (2P) -1
+24V
P24V16

AP016
SPAN CONTROLLER(6 SPAN)

【FOR M/G TYPE】

## <SPAN CONTROLLER(8 SPAN)>



OUTPUT NO.
DUST COLLECTOR SHUTTER(8 SPAN)
Y0470
PACKAGE SHUTTER(8 SPAN)
Y0471
SPARE
Y0472
SPARE
Y0473
DUST COLLECTOR SHUTTER2(8 SPAN)
Y0474
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
YV470M
YV471M
YV474M
Y0470
Y0471
Y0474
P24V23
P24V23
P24V23
OUT0 (2P) -1
OUT1 (2P) -1
OUT2 (2P) -1
OUT3 (2P) -1
OUT4 (2P) -1
+24V
P24V23

AP019
SPAN CONTROLLER(8 SPAN)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 15-06-26 | | 7SPAN追加 | M1 | 福沢 | 6 | a~b | 19-05-08 | | 8スパン対応、仕様追記 | M3 | 平野 |
| 2 | a~b | 12-10-02 | | デバイス説明追記 | M0 | 福沢 | 5 | ~ | 18-10-23 | | CAD機能対応 | M2 | 平野 |
| 1 | ~ | 12-02-13 | | 図面名称修正 | M0 | 伊藤 | 4 | a~c | 16-12-22 | | フィードセパレータ追加,シンボル置換え | M2 | 平野 |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019-05-08 | K.KAWAMOTO | 機種 MACHINE | 9CA | 名称 NAME | SEQUENCE DIAGRAM (SPAN CONTROLLER OUTPUT) |
| 設計 DESIGNED | 2011-11-28 | M.ITO | 尺度 SCALE | | 図番 DRW.NO | 9CA-QA01B-M3 |
| 製図 DRAWN | 2011-11-28 | M.YOSHIDA | サイズ SIZE | 2 | | 306 |

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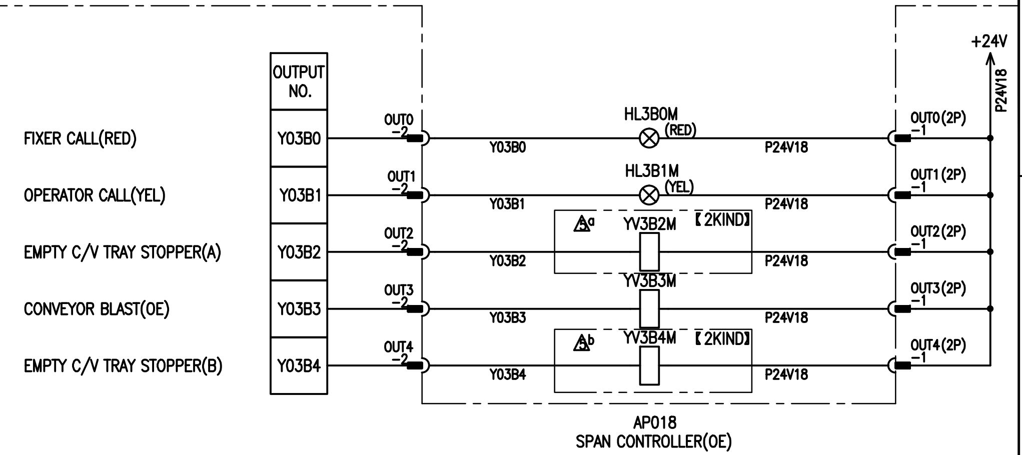
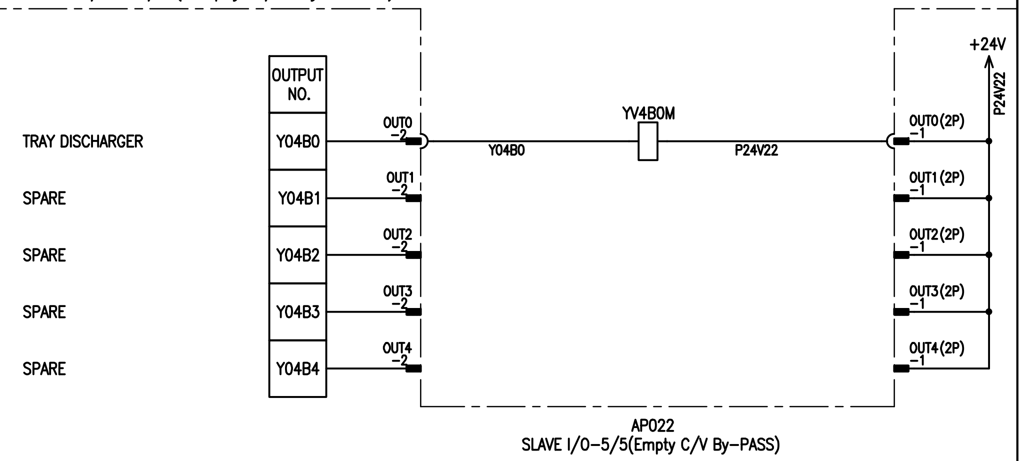
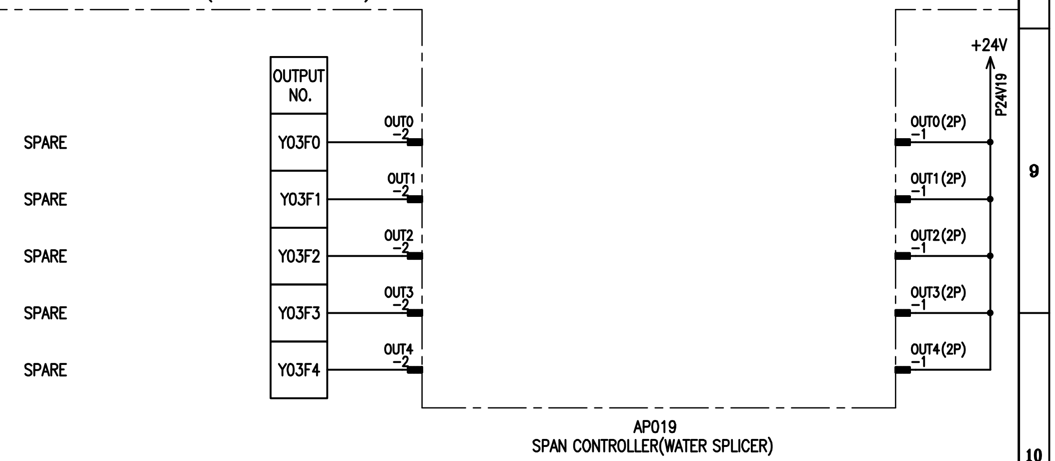
## <SPAN CONTROLLER(OE)>


OUTPUT NO.
FIXER CALL(RED)
Y03B0
OPERATOR CALL(YEL)
Y03B1
EMPTY C/V TRAY STOPPER(A)
Y03B2
CONVEYOR BLAST(OE)
Y03B3
EMPTY C/V TRAY STOPPER(B)
Y03B4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
HL3B0M (RED)
HL3B1M (YEL)
△5a YV3B2M 【2KIND】
YV3B3M
△5b YV3B4M 【2KIND】
Y03B0
Y03B1
Y03B2
Y03B3
Y03B4
P24V18
P24V18
P24V18
P24V18
P24V18
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V18
AP018
SPAN CONTROLLER(OE)

## <SLAVE I/O-5/5(Empty C/V By-PASS)>


OUTPUT NO.
TRAY DISCHARGER
Y04B0
SPARE
Y04B1
SPARE
Y04B2
SPARE
Y04B3
SPARE
Y04B4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
YV4B0M
Y04B0
P24V22
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V22
AP022
SLAVE I/O-5/5(Empty C/V By-PASS)

## <SPAN CONTROLLER(WATER SPLICER)>


OUTPUT NO.
SPARE
Y03F0
SPARE
Y03F1
SPARE
Y03F2
SPARE
Y03F3
SPARE
Y03F4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
+24V
P24V19
AP019
SPAN CONTROLLER(WATER SPLICER)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | ~ | 16-12-22 | | AP022追加,シンボル置換え | N2 | 平野 | | ~ | | | | | | 備考<br>APPENDIX |
| △2 | a~b | 12-10-02 | | デバイス削除 | N1 | 福沢 | △5 | a~b | 18-10-23 | | リターンC/V分割対応 | N3 | 平野 | |
| △1 | ~ | 12-02-13 | | 図面名称修正 | N0 | 伊藤 | △4 | ~ | 18-08-06 | | 誤記修正 | N2 | 平野 | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 検 図<br>CHECKED | 2018-10-23 | K.KAWAMOTO | 機 種<br>MACHINE | 9CA | 名 称<br>NAME | SEQUENCE DIAGRAM<br>(SPAN CONTROLLER OUTPUT) |
| 設 計<br>DESIGNED | 2011-11-28 | M.ITO | 尺 度<br>SCALE | | 図 番<br>DRW.NO | 9CA-QA01B-N3 |
| 製 図<br>DRAWN | 2011-11-28 | M.YOSHIDA | サイズ<br>SIZE | 2 | | 305 |

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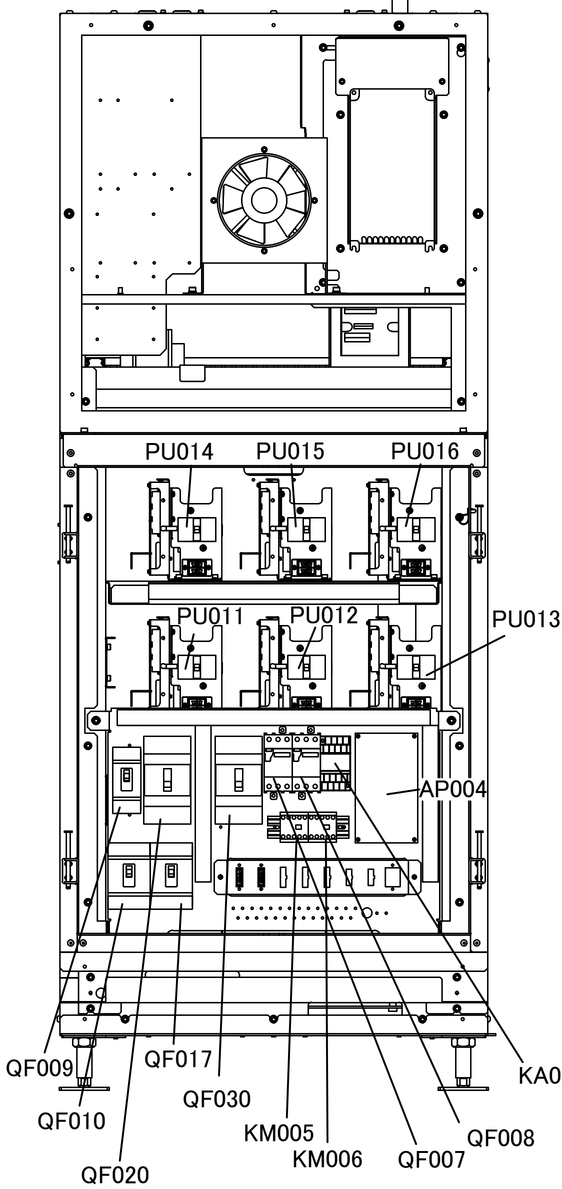
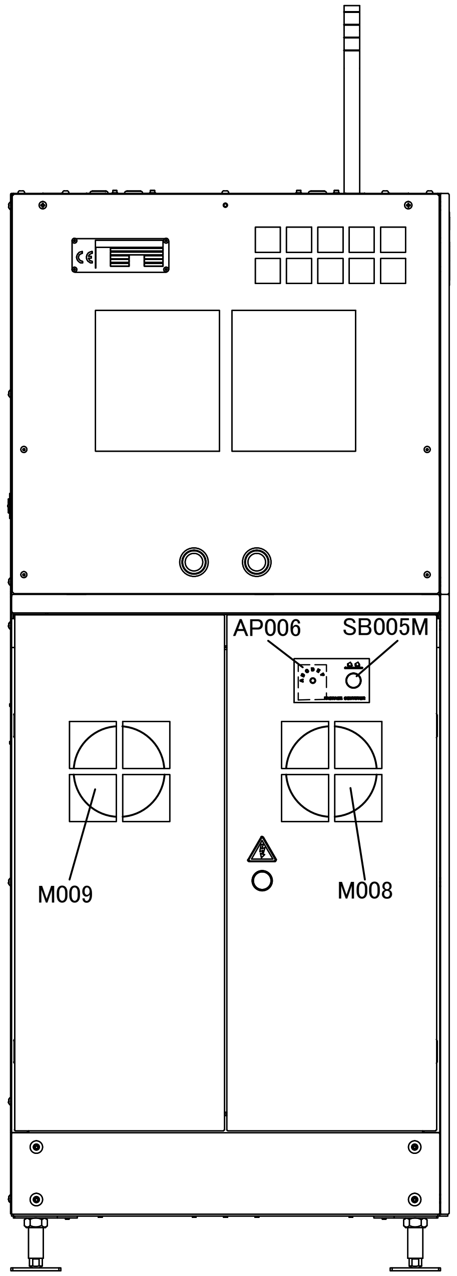
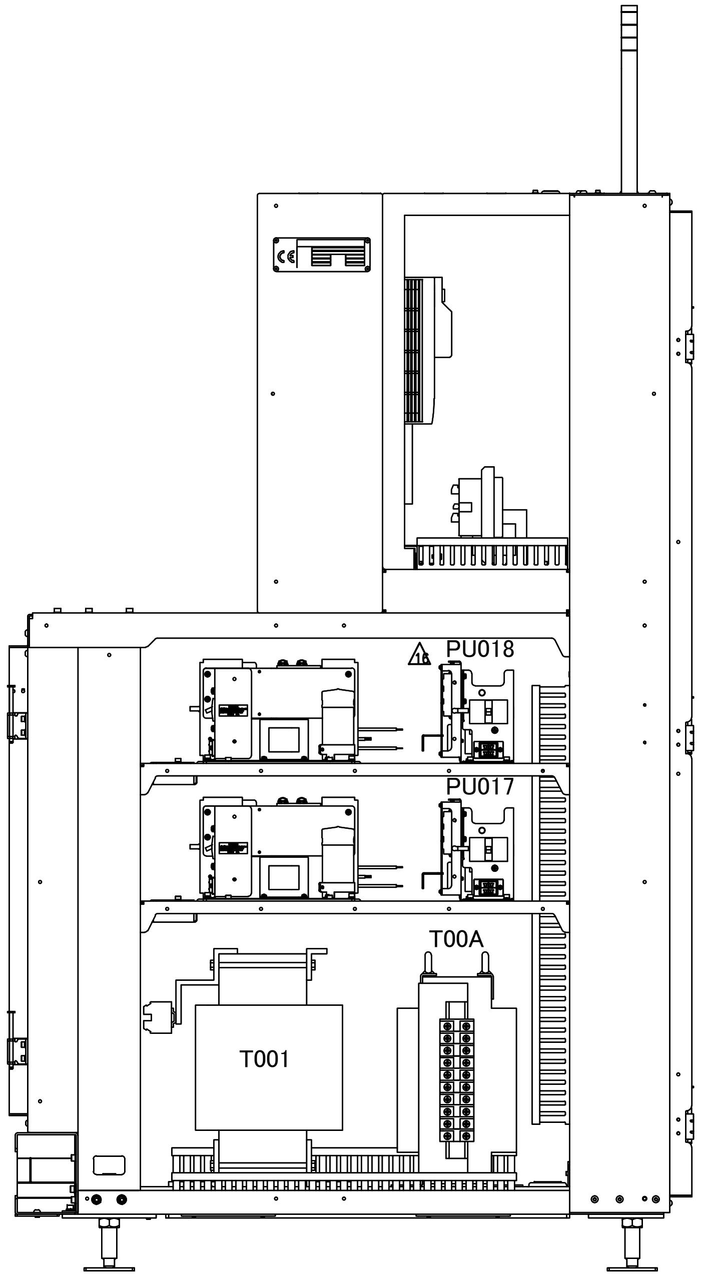

PU014
PU015
PU016
PU011
PU012
PU013
AP004
QF009
QF010
QF020
QF017
QF030
KM005
KM006
QF007
QF008
KA001

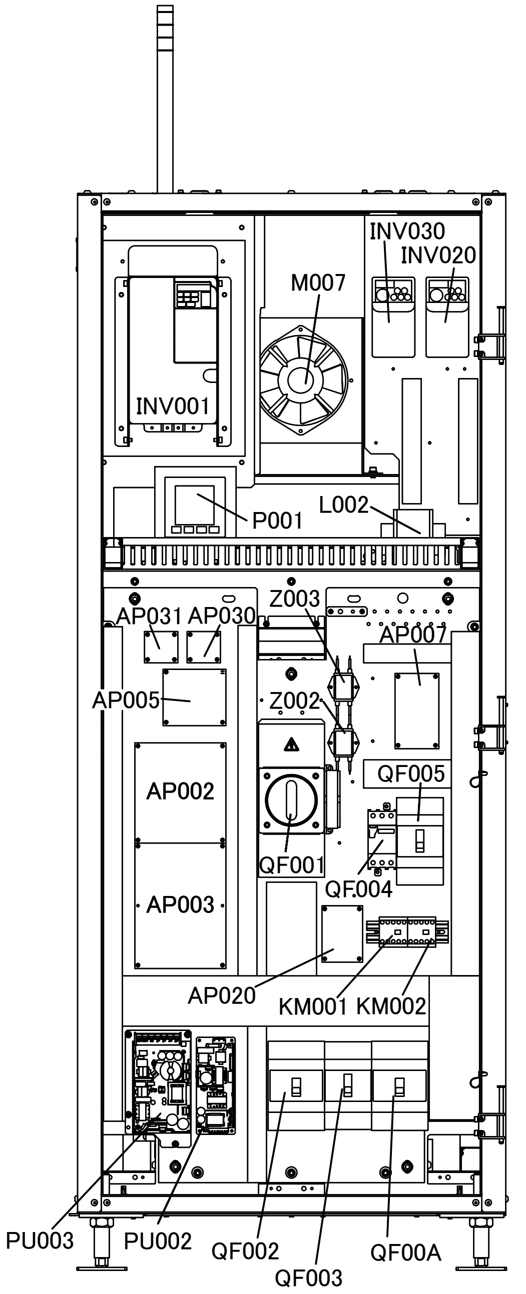
<BACK VIEW2>


AP006
SB005M
M009
M008

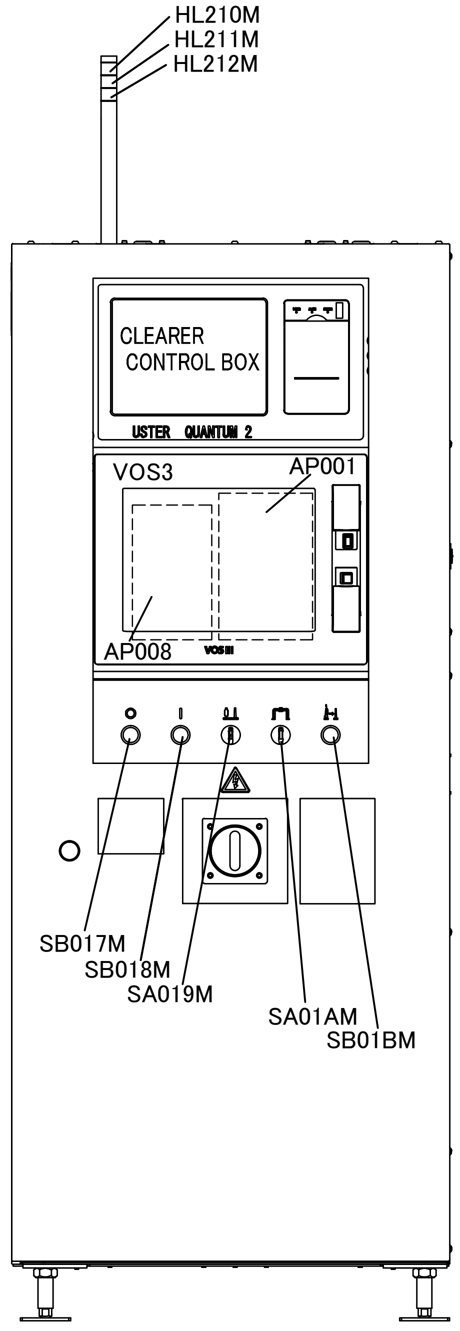
<BACK VIEW>


PU018
PU017
T00A
T001

<SIDE VIEW>


INV030
INV020
M007
INV001
P001
L002
AP031
AP030
Z003
AP007
AP005
Z002
QF005
AP002
QF001
QF004
AP003
AP020
KM001
KM002
PU003
PU002
QF002
QF003
QF00A

<FRONT VIEW2>


HL210M
HL211M
HL212M
CLEARER
CONTROL BOX
USTER QUANTUM 2
VOS3
AP001
AP008
VOSⅢ
SB017M
SB018M
SA019M
SA01AM
SB01BM

<FRONT VIEW1>

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | a ~ c | 14-06-04 | | L001,Z001,カバー削除 | 18 | 福沢 | 16 | | 19-05-08 | | 8スパン対応 | 1F | 平野 |
| 7 | | 13-12-24 | | 停電検出基板への変更 | 17 | 福沢 | 15 | | 19-04-18 | | KA001追加 | 1E | 平野 |
| 6 | a ~ d | 13-04-08 | | リアクトル位置変更 | 16 | 福沢 | 14 | | 18-11-26 | | QPRO EX対応 | 1D | 平野 |
| 5 | | 12-11-05 | | VOS3用電源削除 | 15 | 福沢 | 13 | | 15-12-21 | | M010削除 | 1C | 春日 |
| 4 | | 12-10-31 | | 端子台削除 | 14 | 福沢 | 12 | | 15-10-27 | | SC001削除 | 1B | 春日 |
| 3 | a~ b | 12-10-02 | | ホット用ブレーカー削除,VOS3用部品追加 | 13 | 福沢 | 11 | a~ b | 15-06-26 | | M010,PU017追加 | 1A | 福沢 |
| 2 | ~ | 12-06-19 | | VOSサークル電源用端子台追加 | 12 | 福沢 | 10 | ~ | 14-11-08 | | SC001追加 | 19 | 福沢 |
| 1 | a~ g | 12-03-29 | | 電気記号変更 | 11 | 伊藤 | 9 | ~ | 14-07-07 | | QF010位置変更 | 18 | 福沢 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |

備考
APPENDIX

40

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機 種<br>MACHINE | 9CA | 名 称<br>NAME | CONSTRUCTION DIAGRAM<br>(MAIN CONTOROL BOX) |
| 検 図<br>CHECKED | 2019 - 05 - 08 | K.KAWAMOTO | | | | |
| 設 計<br>DESIGNED | 2012 - 03 - 01 | M.ITO | 尺 度<br>SCALE | | 図 番<br>DRW.NO | 9CA-QA01C-1F |
| 製 図<br>DRAWN | 2012 - 03 - 01 | M.YOSHIDA | サイズ<br>SIZE | 2 | | F0G |

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|  | Parameter Number | SETTING |  | Name | Notes |
|---|---|---|---|---|---|
|  |  | RETURN C/V INVERTER | PACKAGE C/V INVERTER |  |  |
| △a | Pr5 | 30Hz | 60Hz | Multi−speed setting (middle speed) |  |
| △b | Pr7 | 5.0s | 0.3s | Acceleration time |  |
| △c | Pr8 | 0.1s | 0.4s | Deceleration time |  |
| △d | Pr9 | 1.24A/1.09A | 1.8A/1.5A | Electronic thermal O/L relay | Set according to power frequency 50Hz/60Hz |
| △e | Pr77 | 2 | 2 | Parameter write selection |  |
| △f | Pr79 | 2 | 2 | Operation mode selection |  |
|  | Pr117 | 11 | 9 | PU Communication Station Number |  |
|  | Pr120 | 0 | 0 | PU Communication Parity Check | Without Parity Check<br>Stop Bit Length 2 Bits |
|  | Pr122 | 9999 | 9999 | PU Communication Check Time Interval |  |
|  | Pr160 | 0 | 0 | Extended Function Display Selection | Displays Simple Mode + Extended Parameters |
| △g | Pr180 | 0 | 66 | RL terminal function selection | 0:Low−speed operation command<br>66:External/NET operation switchover |
| △h | Pr338 | 0 | 1 | Communication operation command source | 0:Start command source communication<br>1:Start command source external |
| △i | Pr340 | 1 | 1 | Communication startup mode selection | Network operation mode |
|  | Pr549 | 1 | 1 | Protocol Selection | Modbus − RTU Protocol |
| △j | Pr551 | 9999 | 4 | PU mode operation command source selection |  |
| △k | Pr882 | 1 | 1 | Regeneration avoidance operation selection | Regeneration avoidance function is always valid |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |
| △1 | a ~k | 19-09-17 |  | パラメータ追記,Pr118削除 | 11 | 平野 |  | ~ |  |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | APPENDIX |

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  |  |  | MACHINE | 9CA | NAME | SETTING DIAGRAM<br>(RETURN C/V INV. ,PACKAGE C/V INV.) |
| CHECKED | 2019 - 09 - 17 | K.KAWAMOTO |  |  |  |  |
| DESIGNED | 2018 - 10 - 25 | K.HIRANO | SCALE |  | DRW.NO | 9CA−QA01E−11 |
| DRAWN | 2018 - 10 - 25 | M.YOSHIDA | SIZE | 2 |  | 101 |

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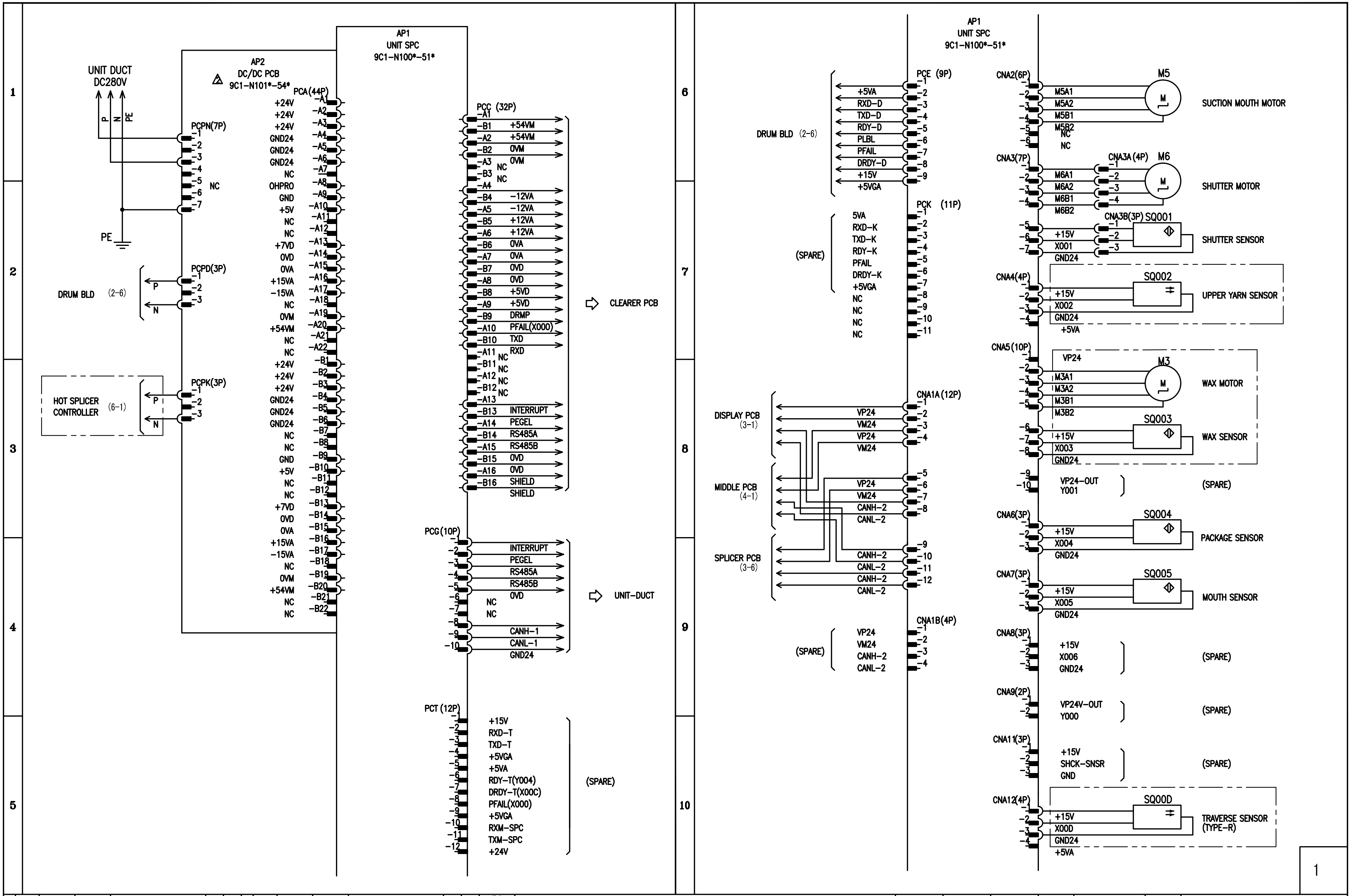
# Electrical Drawing List

**SERIAL No.** 20SX315710:001
**TYPE** QPRO EX
**Title** UNIT

| Drawing Name | Drawing No. |
|---|---|
| SEQUENCE DIAGRAM (UNIT FRAME MAIN) | 9C1-QB10B-11 |
| SEQUENCE DIAGRAM (UNIT FRAME MAIN) | 9C1-QB10B-21 |
| SEQUENCE DIAGRAM (UNIT FRAME SLAVE) | 9C1-QB10B-32 |
| SEQUENCE DIAGRAM (UNIT FRAME SLAVE) | 9C1-QB10B-40 |
| SEQUENCE DIAGRAM (UNIT FRAME SLAVE) | 9C1-QB10B-50 |
| SEQUENCE DIAGRAM (UNIT FRAME HOT SPLICER) | 9C1-QB10B-60 |


1
2
3
4
5
6
7
8
9
10
UNIT DUCT
DC280V
P N PE
PE
AP2
DC/DC PCB
9C1-N101*-54*
PCPN(7P)
-1 -2 -3 -4 -5 -6 -7
NC
PCPD(3P)
DRUM BLD (2-6)
P N
PCPK(3P)
HOT SPLICER CONTROLLER (6-1)
PCA(44P)
-A1 +24V
-A2 +24V
-A3 +24V
-A4 GND24
-A5 GND24
-A6 GND24
-A7 NC
-A8 OHPRO
-A9 GND
-A10 +5V
-A11 NC
-A12 NC
-A13 +7VD
-A14 0VD
-A15 0VA
-A16 +15VA
-A17 -15VA
-A18 NC
-A19 0VM
-A20 +54VM
-A21 NC
-A22 NC
-B1 +24V
-B2 +24V
-B3 +24V
-B4 GND24
-B5 GND24
-B6 GND24
-B7 NC
-B8 NC
-B9 GND
-B10 +5V
-B11 NC
-B12 NC
-B13 +7VD
-B14 0VD
-B15 0VA
-B16 +15VA
-B17 -15VA
-B18 NC
-B19 0VM
-B20 +54VM
-B21 NC
-B22 NC
AP1
UNIT SPC
9C1-N100*-51*
PCC (32P)
-A1
-B1 +54VM
-A2 +54VM
-B2 0VM
-A3 0VM
-B3 NC
-A4 NC
-B4 -12VA
-A5 -12VA
-B5 +12VA
-A6 +12VA
-B6 0VA
-A7 0VA
-B7 0VD
-A8 0VD
-B8 +5VD
-A9 +5VD
-B9 DRMP
-A10 PFAIL(X000)
-B10 TXD
-A11 RXD
-B11 NC
-A12 NC
-B12 NC
-A13 NC
-B13 INTERRUPT
-A14 PEGEL
-B14 RS485A
-A15 RS485B
-B15 0VD
-A16 0VD
-B16 SHIELD
SHIELD
CLEARER PCB
PCG(10P)
-1 INTERRUPT
-2 PEGEL
-3 RS485A
-4 RS485B
-5 0VD
-6 NC
-7 NC
-8 CANH-1
-9 CANL-1
-10 GND24
UNIT-DUCT
PCT (12P)
-1 +15V
-2 RXD-T
-3 TXD-T
-4 +5VGA
-5 +5VA
-6 RDY-T(Y004)
-7 DRDY-T(X00C)
-8 PFAIL(X000)
-9 +5VGA
-10 RXM-SPC
-11 TXM-SPC
-12 +24V
(SPARE)
AP1
UNIT SPC
9C1-N100*-51*
PCE (9P)
DRUM BLD (2-6)
-1 +5VA
-2 RXD-D
-3 TXD-D
-4 RDY-D
-5 PLBL
-6 PFAIL
-7 DRDY-D
-8 +15V
-9 +5VGA
PCK (11P)
(SPARE)
-1 5VA
-2 RXD-K
-3 TXD-K
-4 RDY-K
-5 PFAIL
-6 DRDY-K
-7 +5VGA
-8 NC
-9 NC
-10 NC
-11 NC
CNA1A (12P)
DISPLAY PCB (3-1)
-1 VP24
-2 VM24
-3 VP24
-4 VM24
MIDDLE PCB (4-1)
-5 VP24
-6 VM24
-7 CANH-2
-8 CANL-2
SPLICER PCB (3-6)
-9 CANH-2
-10 CANL-2
-11 CANH-2
-12 CANL-2
CNA1B(4P)
(SPARE)
-1 VP24
-2 VM24
-3 CANH-2
-4 CANL-2
CNA2(6P)
M5
-1 M5A1
-2 M5A2
-3 M5B1
-4 M5B2
-5 NC
-6 NC
SUCTION MOUTH MOTOR
CNA3(7P)
CNA3A (4P)
M6
-1 M6A1
-2 M6A2
-3 M6B1
-4 M6B2
SHUTTER MOTOR
CNA3B(3P)
SQ001
-5 +15V
-6 X001
-7 GND24
SHUTTER SENSOR
CNA4(4P)
SQ002
-1 +15V
-2 X002
-3 GND24
-4 +5VA
UPPER YARN SENSOR
CNA5(10P)
VP24
M3
M3A1
M3A2
M3B1
M3B2
WAX MOTOR
SQ003
+15V
X003
GND24
WAX SENSOR
-9 VP24-OUT
-10 Y001
(SPARE)
CNA6(3P)
SQ004
+15V
X004
GND24
PACKAGE SENSOR
CNA7(3P)
SQ005
+15V
X005
GND24
MOUTH SENSOR
CNA8(3P)
+15V
X006
GND24
(SPARE)
CNA9(2P)
VP24V-OUT
Y000
(SPARE)
CNA11(3P)
+15V
SHCK-SNSR
GND
(SPARE)
CNA12(4P)
SQ00D
+15V
X00D
GND24
+5VA
TRAVERSE SENSOR (TYPE-R)
1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| 2 | ~ | 18-12-25 |  | AP2電源仕様分け | 11 | 寺尾 |  | ~ |  |  |  |  |  |
| 1 | ~ | 18-02-15 |  | 誤記訂正(X00D→X002) | 10 | 寺尾 |  | ~ |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| CHECKED | 2018-12-25 | K.KAWAMOTO | MACHINE | 9C1 | NAME | SEQUENCE DIAGRAM<br>(UNIT FRAME MAIN) |
| DESIGNED | 2016-01-28 | Y.TERAO | SCALE |  | DRW.NO | 9C1-QB10B-11 |
| DRAWN | 2016-01-28 | Y.TERAO | SIZE | 2 |  | 102 |

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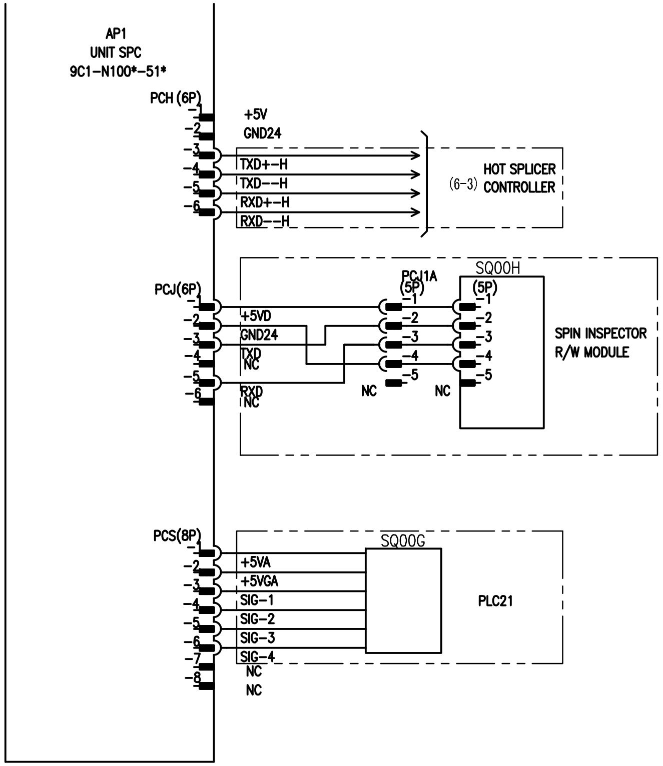
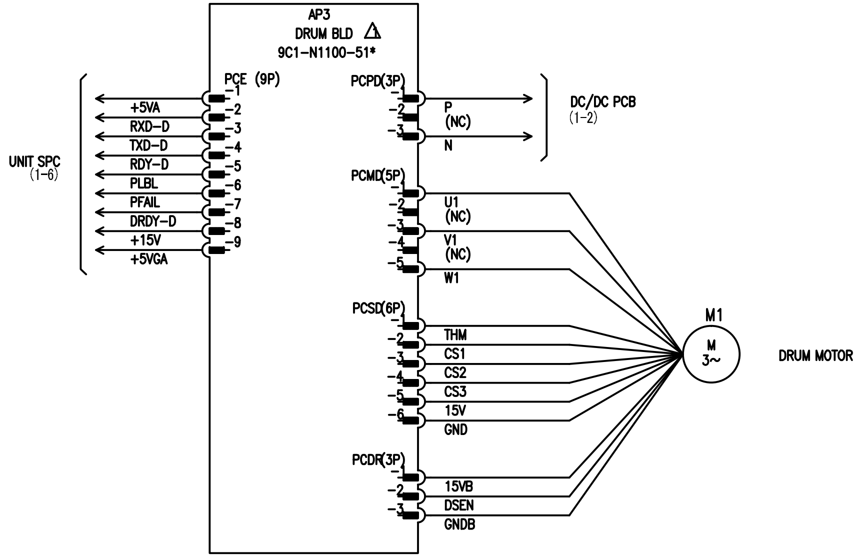

AP1
UNIT SPC
9C1-N100*-51*
PCH (6P)
+5V
GND24
TXD+-H
TXD--H
RXD+-H
RXD--H
(6-3)
HOT SPLICER
CONTROLLER
PCJ(6P)
+5VD
GND24
TXD
NC
RXD
NC
PCJ1A
(5P)
SQ00H
(5P)
NC
NC
SPIN INSPECTOR
R/W MODULE
PCS(8P)
SQ00G
+5VA
+5VGA
SIG-1
SIG-2
SIG-3
SIG-4
NC
NC
PLC21


AP3
DRUM BLD 1
9C1-N1100-51*
PCE (9P)
UNIT SPC
(1-6)
+5VA
RXD-D
TXD-D
RDY-D
PLBL
PFAIL
DRDY-D
+15V
+5VGA
PCPD(3P)
P
(NC)
N
DC/DC PCB
(1-2)
PCMD(5P)
U1
(NC)
V1
(NC)
W1
PCSD(6P)
THM
CS1
CS2
CS3
15V
GND
PCDR(3P)
15VB
DSEN
GNDB
M1
M
3~
DRUM MOTOR

2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| 1 | ~ | 18-12-25 |  | AP3_IPM変更 | 21 | 寺尾 |  | ~ |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| CHECKED | 2018 - 12 - 25 | K.KAWAMOTO | 機種<br>MACHINE | 9C1 | 名称<br>NAME | SEQUENCE DIAGRAM<br>(UNIT FRAME MAIN) |
| DESIGNED | 2016 - 01 - 22 | Y.TERAO | SCALE |  | 図番<br>DRW.NO | 9C1-QB10B-21 |
| DRAWN | 2016 - 01 - 22 | Y.TERAO | サイズ<br>SIZE | 2 |  | 101 |

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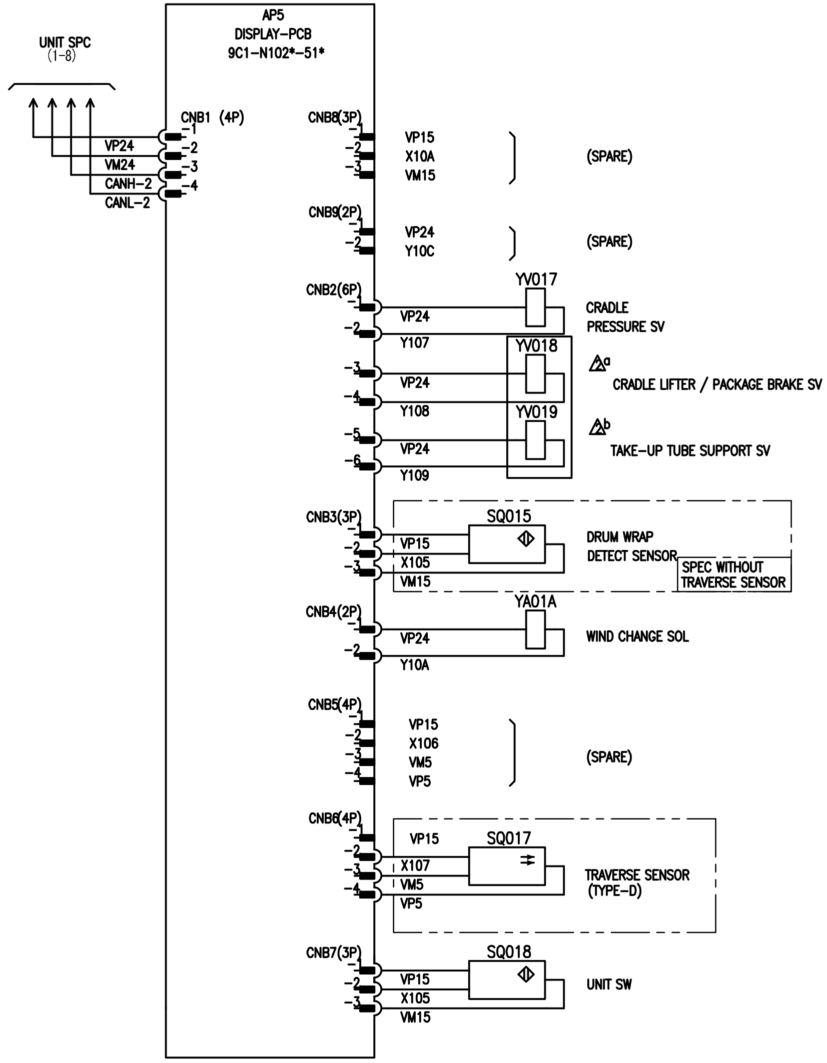
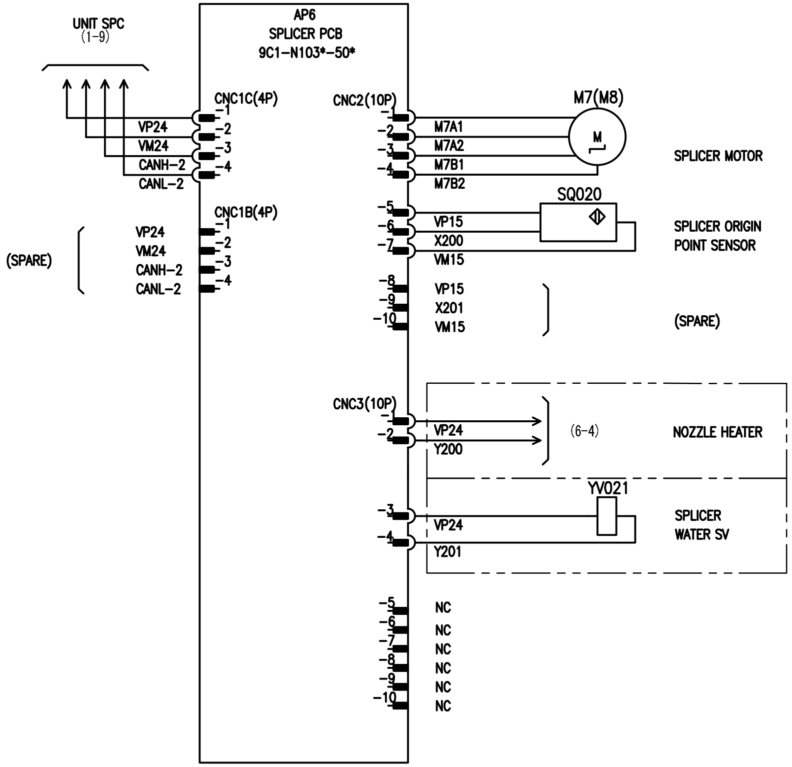

UNIT SPC
(1-8)
AP5
DISPLAY-PCB
9C1-N102*-51*
CNB1 (4P)
VP24
VM24
CANH-2
CANL-2
CNB8(3P)
VP15
X10A
VM15
(SPARE)
CNB9(2P)
VP24
Y10C
(SPARE)
CNB2(6P)
YV017
VP24
Y107
CRADLE
PRESSURE SV
YV018
VP24
Y108
a
CRADLE LIFTER / PACKAGE BRAKE SV
YV019
VP24
Y109
b
TAKE-UP TUBE SUPPORT SV
CNB3(3P)
SQ015
VP15
X105
VM15
DRUM WRAP
DETECT SENSOR
SPEC WITHOUT
TRAVERSE SENSOR
CNB4(2P)
YA01A
VP24
Y10A
WIND CHANGE SOL
CNB5(4P)
VP15
X106
VM5
VP5
(SPARE)
CNB6(4P)
VP15
SQ017
X107
VM5
VP5
TRAVERSE SENSOR
(TYPE-D)
CNB7(3P)
SQ018
VP15
X105
VM15
UNIT SW


UNIT SPC
(1-9)
AP6
SPLICER PCB
9C1-N103*-50*
CNC1C(4P)
VP24
VM24
CANH-2
CANL-2
CNC1B(4P)
(SPARE)
VP24
VM24
CANH-2
CANL-2
CNC2(10P)
M7(M8)
M
M7A1
M7A2
M7B1
M7B2
SPLICER MOTOR
SQ020
VP15
X200
VM15
SPLICER ORIGIN
POINT SENSOR
VP15
X201
VM15
(SPARE)
CNC3(10P)
VP24
Y200
(6-4)
NOZZLE HEATER
YV021
VP24
Y201
SPLICER
WATER SV
NC
NC
NC
NC
NC
NC

3

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| △2 | a~b | 18-12-25 | | YV018,YV019部品変更 | 32 | 寺尾 | | ~ | | | | | |
| △1 | ~ | 18-11-08 | | QPRO EX対応 | 31 | 寺尾 | | ~ | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | MACHINE | 9C1 | NAME | SEQUENCE DIAGRAM<br>(UNIT FRAME SLAVE) |
| CHECKED | 2018-12-25 | K.KAWAMOTO | | | | |
| DESIGNED | 2016-01-28 | Y.TERAO | SCALE | | DRW.NO | 9C1-QB10B-32 |
| DRAWN | 2016-01-28 | Y.TERAO | サイズ SIZE | 2 | | 202 |

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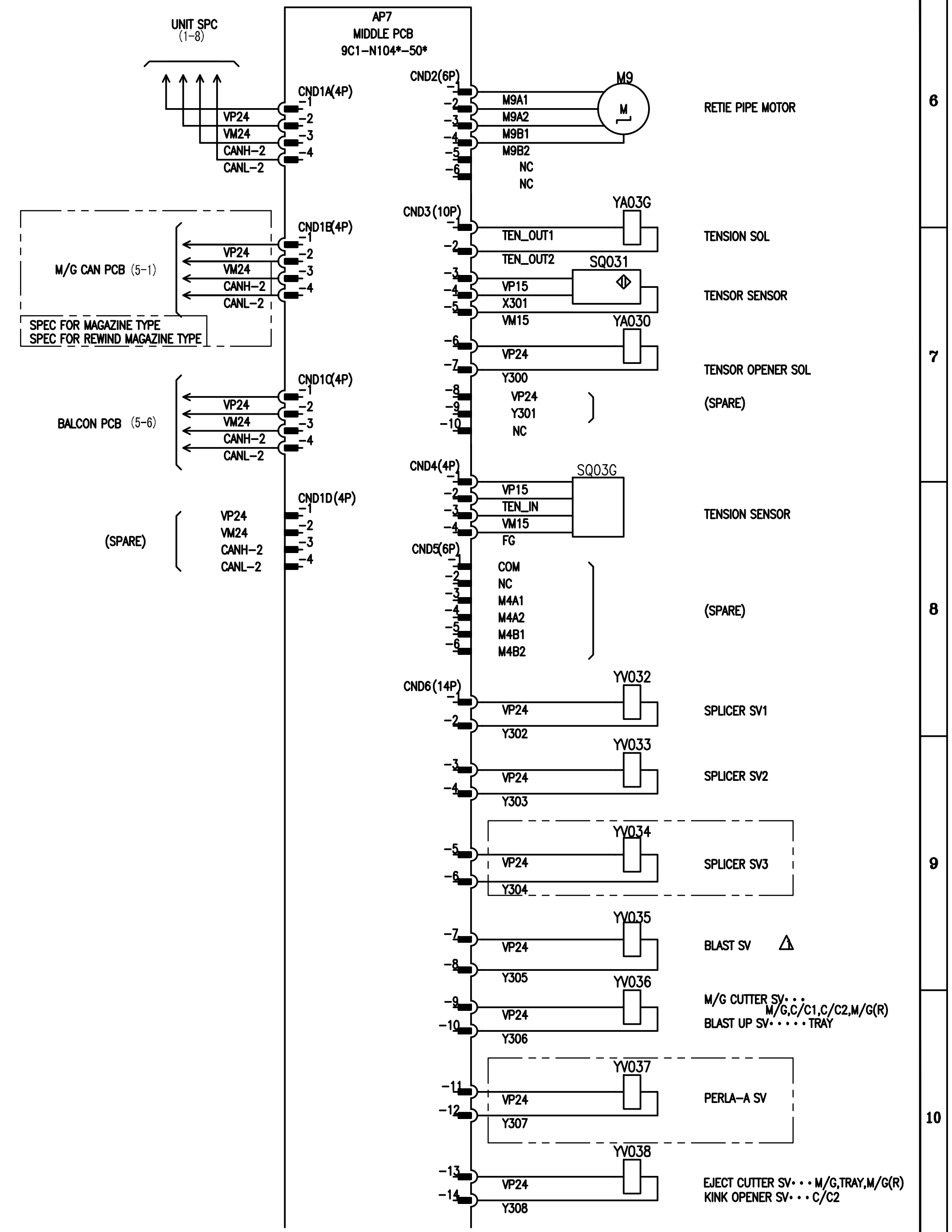
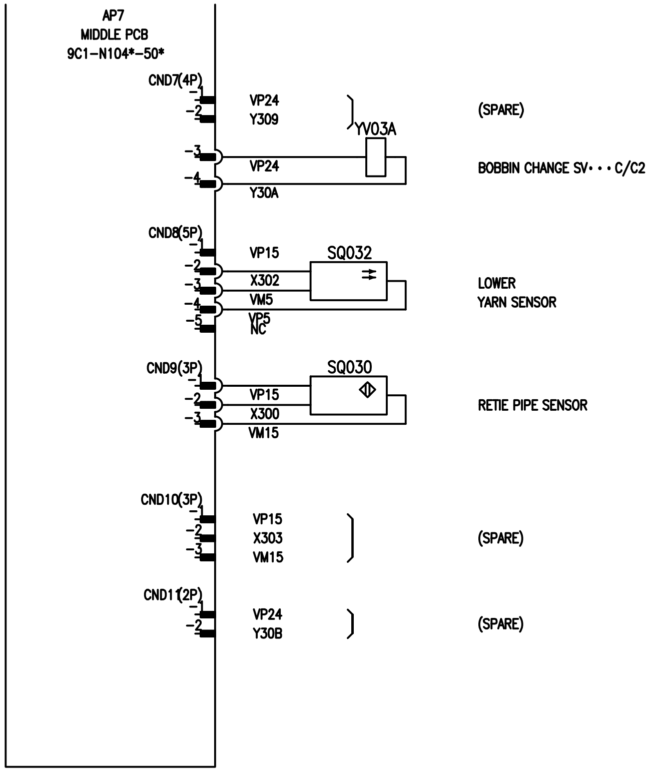

UNIT SPC
(1-8)
AP7
MIDDLE PCB
9C1-N104*-50*
CND1A(4P)
VP24
VM24
CANH-2
CANL-2
CND1B(4P)
M/G CAN PCB (5-1)
VP24
VM24
CANH-2
CANL-2
SPEC FOR MAGAZINE TYPE
SPEC FOR REWIND MAGAZINE TYPE
CND1C(4P)
BALCON PCB (5-6)
VP24
VM24
CANH-2
CANL-2
CND1D(4P)
(SPARE)
VP24
VM24
CANH-2
CANL-2
CND2(6P)
M9
M
M9A1
M9A2
M9B1
M9B2
NC
NC
RETIE PIPE MOTOR
CND3(10P)
YA03G
TEN_OUT1
TEN_OUT2
TENSION SOL
SQ031
VP15
X301
VM15
TENSOR SENSOR
YA030
VP24
Y300
TENSOR OPENER SOL
VP24
Y301
NC
(SPARE)
CND4(4P)
SQ03G
VP15
TEN_IN
VM15
FG
TENSION SENSOR
CND5(6P)
COM
NC
M4A1
M4A2
M4B1
M4B2
(SPARE)
CND6(14P)
YV032
VP24
Y302
SPLICER SV1
YV033
VP24
Y303
SPLICER SV2
YV034
VP24
Y304
SPLICER SV3
YV035
VP24
Y305
BLAST SV
YV036
VP24
Y306
M/G CUTTER SV･･･M/G,C/C1,C/C2,M/G(R)
BLAST UP SV･････TRAY
YV037
VP24
Y307
PERLA-A SV
YV038
VP24
Y308
EJECT CUTTER SV･･･M/G,TRAY,M/G(R)
KINK OPENER SV･･･C/C2


AP7
MIDDLE PCB
9C1-N104*-50*
CND7(4P)
VP24
Y309
YV03A
(SPARE)
VP24
Y30A
BOBBIN CHANGE SV･･･C/C2
CND8(5P)
VP15
X302
VM5
VP5
NC
SQ032
LOWER
YARN SENSOR
CND9(3P)
VP15
X300
VM15
SQ030
RETIE PIPE SENSOR
CND10(3P)
VP15
X303
VM15
(SPARE)
CND11(2P)
VP24
Y30B
(SPARE)

4

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|
|  | ～ |  |  |  |  |  |
|  | ～ |  |  |  |  |  |
| △1 | ～ | 20-06-02 |  | 誤記訂正 | 40 | 寺尾 |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|
|  | ～ |  |  |  |  |  |
|  | ～ |  |  |  |  |  |
|  | ～ |  |  |  |  |  |

備考 APPENDIX

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-06-02 | K.MURAYAMA | 機種 MACHINE | 9C1 | 名称 NAME | SEQUENCE DIAGRAM<br>(UNIT FRAME SLAVE) |  |
| 設計 DESIGNED | 2016-01-27 | Y.TERAO | 尺度 SCALE |  | 図番 DRW.NO | 9C1-QB10B-40 | 001 |
| 製図 DRAWN | 2016-01-27 | Y.TERAO | サイズ SIZE | 2 |  |  |  |

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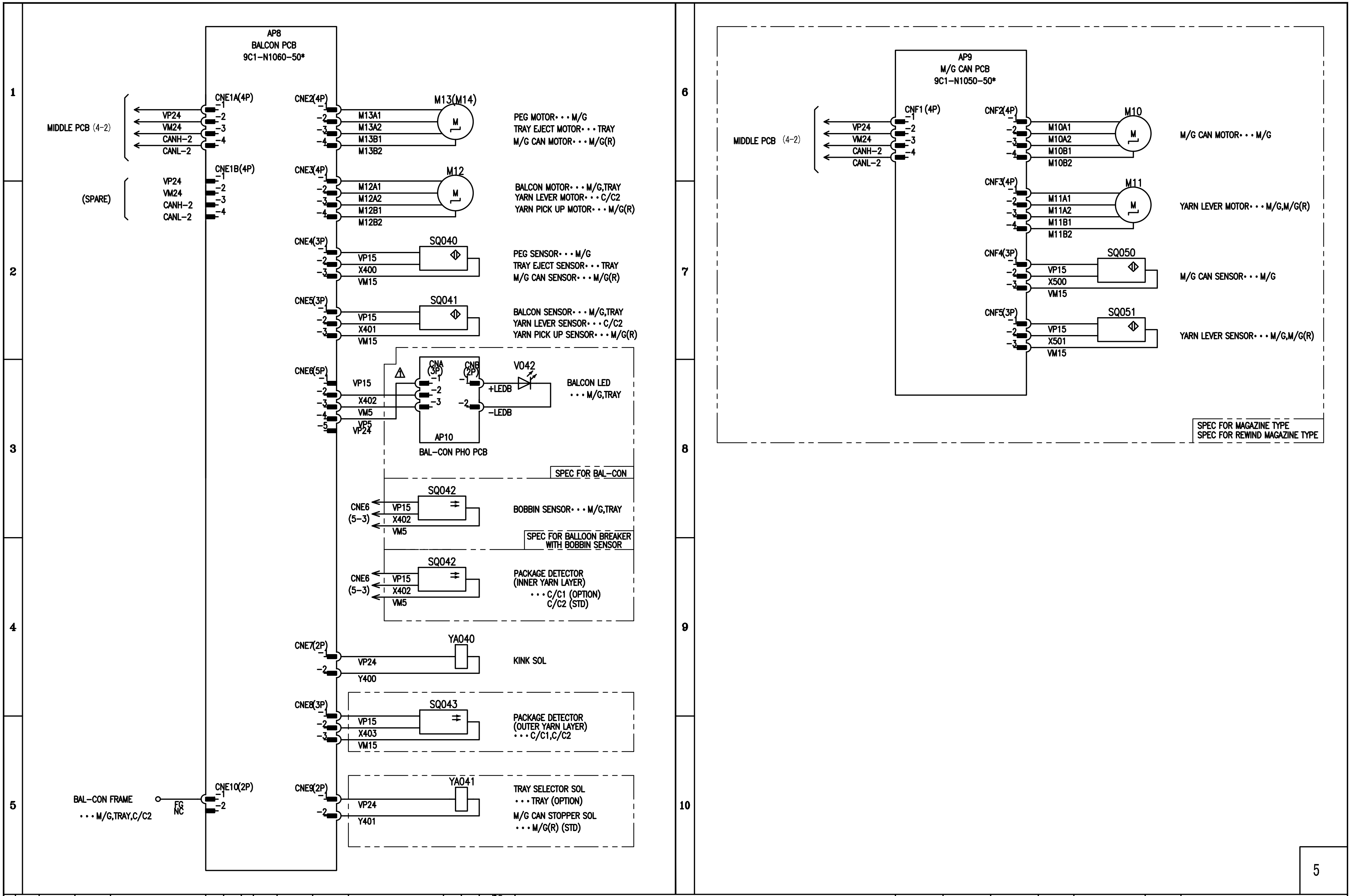
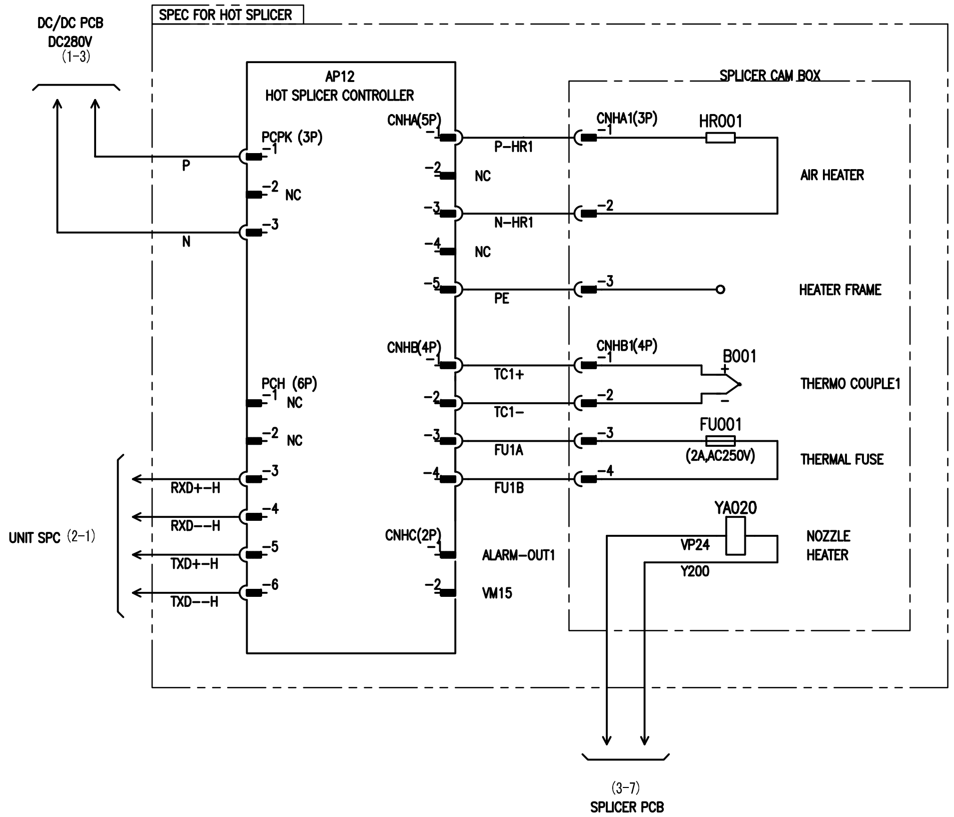

1
2
3
4
5
6
7
8
9
10
AP8
BALCON PCB
9C1-N1060-50*
MIDDLE PCB (4-2)
CNE1A(4P)
VP24
VM24
CANH-2
CANL-2
CNE1B(4P)
(SPARE)
VP24
VM24
CANH-2
CANL-2
CNE2(4P)
M13A1
M13A2
M13B1
M13B2
M13(M14)
PEG MOTOR···M/G
TRAY EJECT MOTOR···TRAY
M/G CAN MOTOR···M/G(R)
CNE3(4P)
M12A1
M12A2
M12B1
M12B2
M12
BALCON MOTOR···M/G,TRAY
YARN LEVER MOTOR···C/C2
YARN PICK UP MOTOR···M/G(R)
CNE4(3P)
VP15
X400
VM15
SQ040
PEG SENSOR···M/G
TRAY EJECT SENSOR···TRAY
M/G CAN SENSOR···M/G(R)
CNE5(3P)
VP15
X401
VM15
SQ041
BALCON SENSOR···M/G,TRAY
YARN LEVER SENSOR···C/C2
YARN PICK UP SENSOR···M/G(R)
CNE6(5P)
VP15
X402
VM5
VP5
VP24
CNA (3P)
CNB (2P)
V042
+LEDB
-LEDB
AP10
BAL-CON PHO PCB
BALCON LED
···M/G,TRAY
SPEC FOR BAL-CON
SQ042
CNE6 (5-3)
VP15
X402
VM5
BOBBIN SENSOR···M/G,TRAY
SPEC FOR BALLOON BREAKER WITH BOBBIN SENSOR
SQ042
CNE6 (5-3)
VP15
X402
VM5
PACKAGE DETECTOR (INNER YARN LAYER)
···C/C1 (OPTION)
C/C2 (STD)
CNE7(2P)
VP24
Y400
YA040
KINK SOL
CNE8(3P)
VP15
X403
VM15
SQ043
PACKAGE DETECTOR (OUTER YARN LAYER)
···C/C1,C/C2
CNE10(2P)
BAL-CON FRAME
···M/G,TRAY,C/C2
FG
NC
CNE9(2P)
VP24
Y401
YA041
TRAY SELECTOR SOL
···TRAY (OPTION)
M/G CAN STOPPER SOL
···M/G(R) (STD)
AP9
M/G CAN PCB
9C1-N1050-50*
MIDDLE PCB (4-2)
CNF1(4P)
VP24
VM24
CANH-2
CANL-2
CNF2(4P)
M10A1
M10A2
M10B1
M10B2
M10
M/G CAN MOTOR···M/G
CNF3(4P)
M11A1
M11A2
M11B1
M11B2
M11
YARN LEVER MOTOR···M/G,M/G(R)
CNF4(3P)
VP15
X500
VM15
SQ050
M/G CAN SENSOR···M/G
CNF5(3P)
VP15
X501
VM15
SQ051
YARN LEVER SENSOR···M/G,M/G(R)
SPEC FOR MAGAZINE TYPE
SPEC FOR REWIND MAGAZINE TYPE

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | | |
| | ~ | | | | | | | ~ | | | | | | |
| △1 | ~ | 16-02-08 | | 誤記訂正 | 50 | 寺尾 | | ~ | | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2016 -02 -08 | K.KAWAMOTO | 機種 MACHINE | 9C1 | 名称 NAME | SEQUENCE DIAGRAM (UNIT FRAME SLAVE) |
| DESIGNED | 2016 -01 -22 | Y.TERAO | SCALE | | DRW.NO | 9C1-QB10B-50 001 |
| DRAWN | 2016 -01 -22 | Y.TERAO | サイズ SIZE | 2 | | Muratec MURATA MACHINERY, LTD. |

A-CAD V4


DC/DC PCB
DC280V
(1-3)
SPEC FOR HOT SPLICER
AP12
HOT SPLICER CONTROLLER
PCPK (3P)
-1
P
-2 NC
-3
N
PCH (6P)
-1 NC
-2 NC
-3
RXD+-H
-4
RXD--H
-5
TXD+-H
-6
TXD--H
UNIT SPC (2-1)
CNHA(5P)
-1
P-HR1
-2
NC
-3
N-HR1
-4
NC
-5
PE
CNHB(4P)
-1
TC1+
-2
TC1-
-3
FU1A
-4
FU1B
CNHC(2P)
-1
ALARM-OUT1
-2
VM15
SPLICER CAM BOX
CNHA1(3P)
-1
HR001
-2
AIR HEATER
-3
HEATER FRAME
CNHB1(4P)
-1
B001
+
-
-2
THERMO COUPLE1
-3
FU001
(2A,AC250V)
-4
THERMAL FUSE
YA020
VP24
Y200
NOZZLE
HEATER
(3-7)
SPLICER PCB

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | | 備考<br>APPENDIX |
| | ~ | | | | | | | ~ | | | | | | |
| | ~ | | | | | | | ~ | | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | |

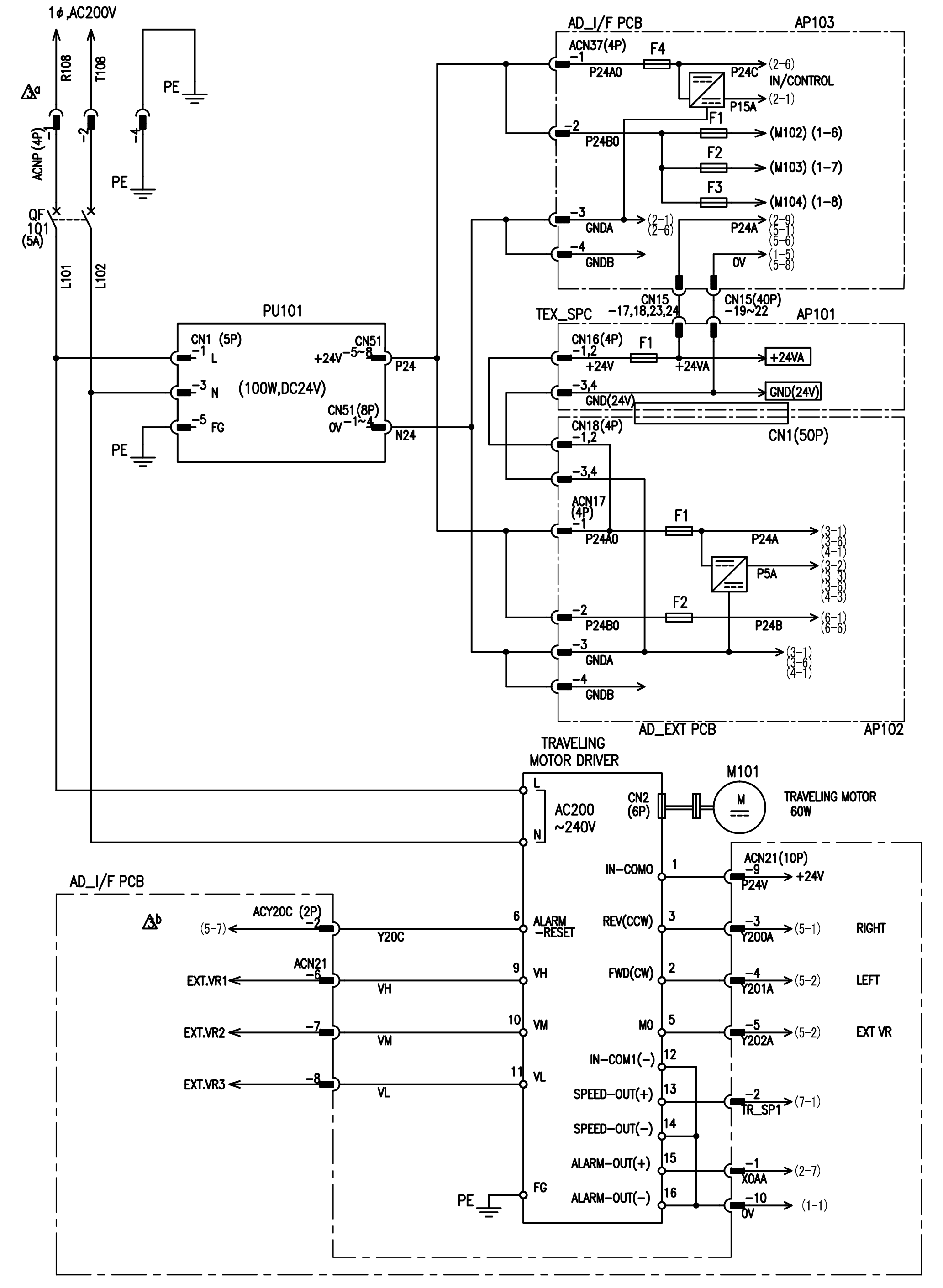
| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | | 名称<br>NAME | SEQUENCE DIAGRAM<br>(UNIT FRAME HOT SPLICER) |
| 検図<br>CHECKED | 2016 -01 -22 | K.KAWAMOTO | | | | |
| 設計<br>DESIGNED | 2016 -01 -22 | Y.TERAO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9C1-QB10B-60 000 |
| 製図<br>DRAWN | 2016 -01 -22 | Y.TERAO | サイズ<br>SIZE | 2 | | Muratec MURATA MACHINERY. LTD. |

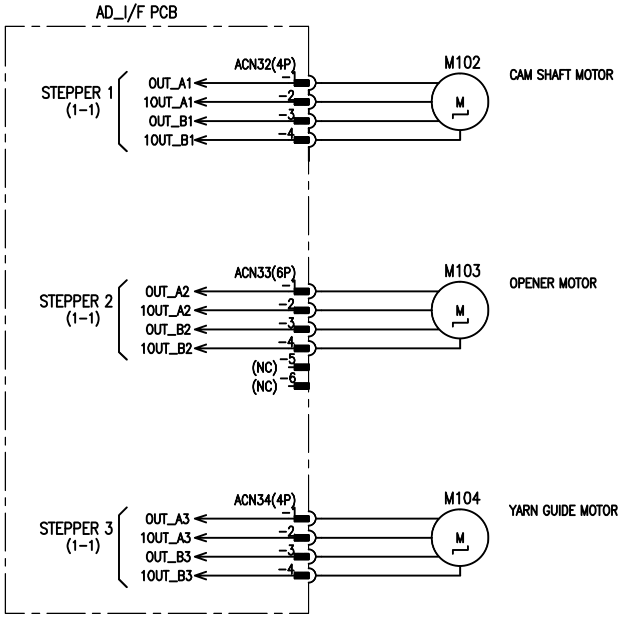
A-CAD V4

# Electrical Drawing List

**SERIAL No.** 20SX315720:001
**TYPE** 9CD
**Title** AD

| Drawing Name | Drawing No. |
|---|---|
| SEQUENCE DIAGRAM (POWER) | 9CD-Q001B-11 |
| SEQUENCE DIAGRAM (INPUT) | 9CD-Q001B-21 |
| SEQUENCE DIAGRAM (INPUT) | 9CD-Q001B-31 |
| SEQUENCE DIAGRAM (INPUT) | 9CD-Q001B-41 |
| SEQUENCE DIAGRAM (OUTPUT) | 9CD-Q001B-53 |
| SEQUENCE DIAGRAM (OUTPUT) | 9CD-Q001B-64 |
| SEQUENCE DIAGRAM (SIGNAL) | 9CD-Q001B-71 |
| CONSTRUCTION DIAGRAM (AD FRAME) | 9CD-Q001C-15 |
| SETTING DIAGRAM (TEX_SPC) | 9CD-Q001C-20 |
| SETTING DIAGRAM (TEX_SPC_AD_EXT) | 9CD-Q001C-30 |
| SETTING DIAGRAM (AD_I/F) | 9CD-Q001C-41 |
| SETTING DIAGRAM (TRAVELING MOTOR DRV) | 9CD-Q001C-50 |
| WIRING DIAGRAM (AD CIRCUIT) | 9CD-Q001A-15 |


1φ,AC200V
R108
T108
PE
ACNP (4P)
-1
-2
-4
QF
1Q1
(5A)
L101
L102
PU101
CN1 (5P)
-1 L
-3 N
-5 FG
(100W,DC24V)
CN51
+24V -5~8
P24
CN51(8P)
0V -1~4
N24
AD_I/F PCB
AP103
ACN37(4P)
-1
P24A0
F4
P24C
(2-6)
IN/CONTROL
P15A
(2-1)
-2
P24B0
F1
(M102) (1-6)
F2
(M103) (1-7)
F3
(M104) (1-8)
-3
GNDA
(2-1)
(2-6)
P24A
(2-9)
(5-1)
(5-6)
-4
GNDB
0V
(1-5)
(5-8)
CN15
-17,18,23,24
CN15(40P)
-19~22
TEX_SPC
AP101
CN16(4P)
-1,2
+24V
F1
+24VA
+24VA
-3,4
GND(24V)
GND(24V)
CN1(50P)
CN18(4P)
-1,2
-3,4
ACN17
(4P)
-1
P24A0
F1
P24A
(3-1)
(3-6)
(4-1)
P5A
(3-2)
(3-3)
(3-5)
(4-3)
-2
P24B0
F2
P24B
(6-1)
(6-6)
-3
GNDA
(3-1)
(3-6)
(4-1)
-4
GNDB
AD_EXT PCB
AP102
TRAVELING
MOTOR DRIVER
L
N
AC200
~240V
CN2
(6P)
M101
M
TRAVELING MOTOR
60W
IN-COMO 1
REV(CCW) 3
FWD(CW) 2
MO 5
IN-COM1(-) 12
SPEED-OUT(+) 13
SPEED-OUT(-) 14
ALARM-OUT(+) 15
ALARM-OUT(-) 16
6 ALARM -RESET
9 VH
10 VM
11 VL
FG
PE
ACN21(10P)
-9
P24V
+24V
-3
Y200A
(5-1)
RIGHT
-4
Y201A
(5-2)
LEFT
-5
Y202A
(5-2)
EXT VR
-2
TR_SP1
(7-1)
-1
X0AA
(2-7)
-10
0V
(1-1)
AD_I/F PCB
ACY20C (2P)
-2
(5-7)
Y20C
ACN21
-6
EXT.VR1
VH
-7
EXT.VR2
VM
-8
EXT.VR3
VL
3a
3b
1
2
3
4
5


AD_I/F PCB
STEPPER 1
(1-1)
ACN32(4P)
OUT_A1 -1
1OUT_A1 -2
OUT_B1 -3
1OUT_B1 -4
M102
M
CAM SHAFT MOTOR
STEPPER 2
(1-1)
ACN33(6P)
OUT_A2 -1
1OUT_A2 -2
OUT_B2 -3
1OUT_B2 -4
(NC) -5
(NC) -6
M103
M
OPENER MOTOR
STEPPER 3
(1-1)
ACN34(4P)
OUT_A3 -1
1OUT_A3 -2
OUT_B3 -3
1OUT_B3 -4
M104
M
YARN GUIDE MOTOR
6
7
8
9
10

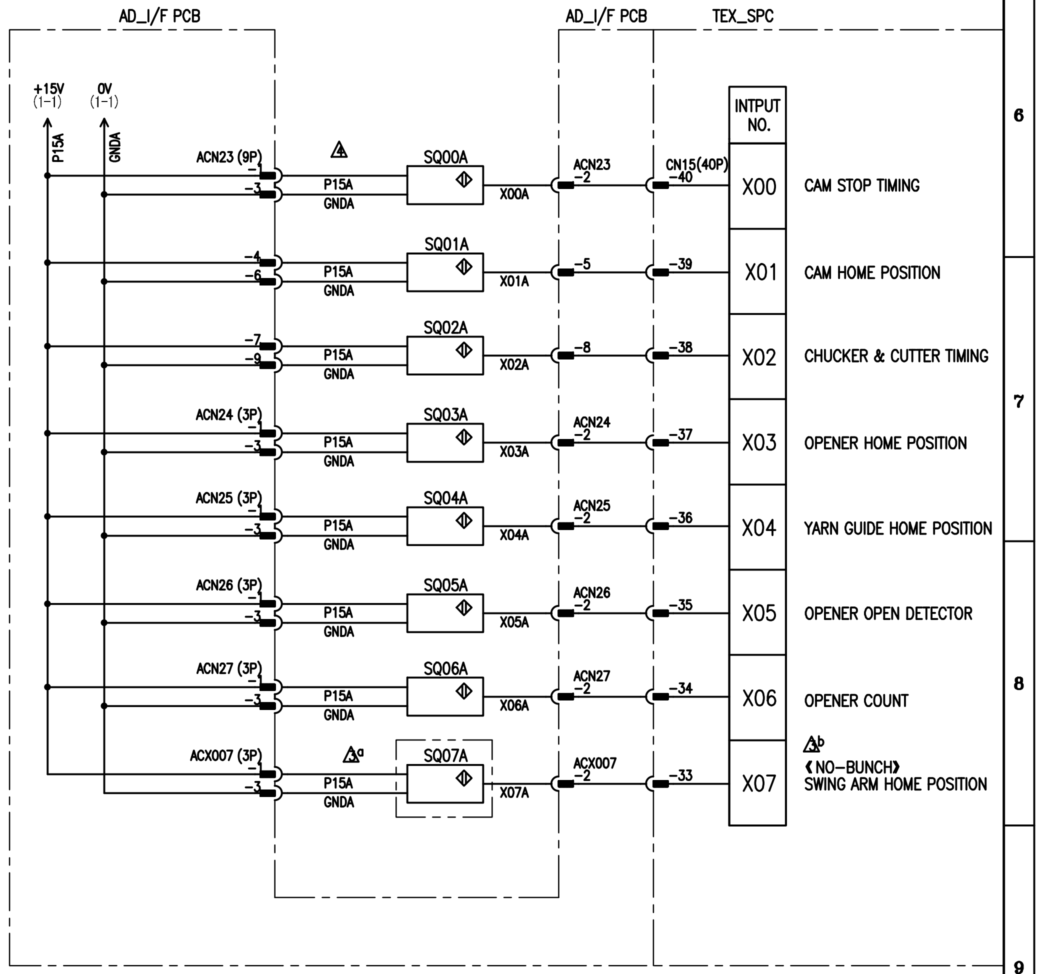
1

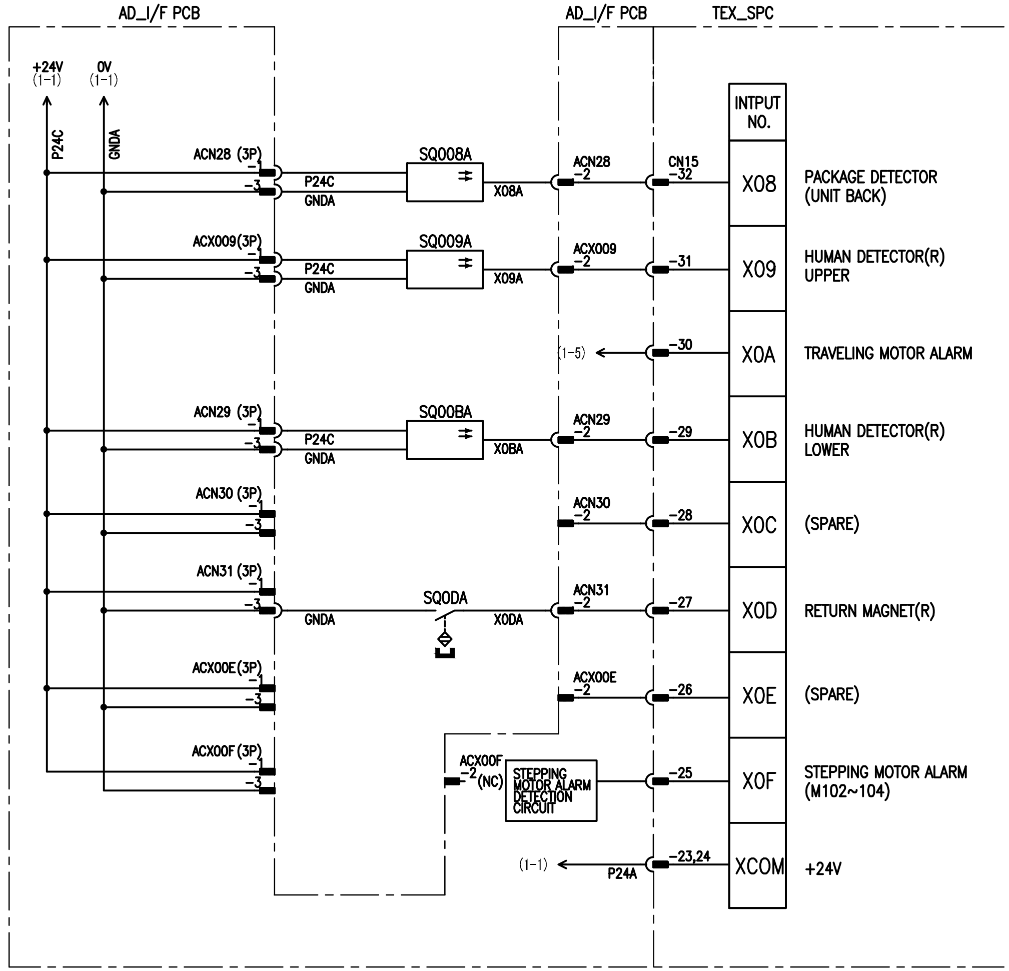
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~b | 18-11-20 | | ｼﾝﾎﾞﾙ置換え、走行ﾓｰﾀｱﾗｰﾑ解除追加 | 11 | 春日 | | ~ | | | | | |
| 2 | ~ | 16-01-12 | | 誤記修正 | 10 | 春日 | | ~ | | | | | |
| 1 | ~ | 12-03-08 | | 誤記修正 | 10 | 福沢 | | ~ | | | | | |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CD | 名称 NAME | SEQUENCE DIAGRAM (POWER) | |
| 検図 CHECKED | 2018-11-20 | K.KAWAMOTO | | | | | |
| 設計 DESIGNED | 2011-11-30 | T.IKEMOTO | 尺度 SCALE | | 図番 DRW.NO | 9CD-Q001B-11 | 103 |
| 製図 DRAWN | 2011-11-30 | M.YOSHIDA | サイズ SIZE | 2 | | | |

muratec MURATA MACHINERY, LTD.


AD_I/F PCB
AD_I/F PCB
TEX_SPC
+15V (1-1)
0V (1-1)
P15A
GNDA
ACN23 (9P) -1 -3
ACN23 -2
CN15(40P) -40
SQ00A
X00A
INTPUT NO.
X00 CAM STOP TIMING
SQ01A -4 -6 -5 -39 X01A
X01 CAM HOME POSITION
SQ02A -7 -9 -8 -38 X02A
X02 CHUCKER & CUTTER TIMING
ACN24 (3P) SQ03A ACN24 -2 -37 X03A
X03 OPENER HOME POSITION
ACN25 (3P) SQ04A ACN25 -2 -36 X04A
X04 YARN GUIDE HOME POSITION
ACN26 (3P) SQ05A ACN26 -2 -35 X05A
X05 OPENER OPEN DETECTOR
ACN27 (3P) SQ06A ACN27 -2 -34 X06A
X06 OPENER COUNT
ACX007 (3P) SQ07A ACX007 -2 -33 X07A
X07 《NO-BUNCH》 SWING ARM HOME POSITION
4
3a
3b

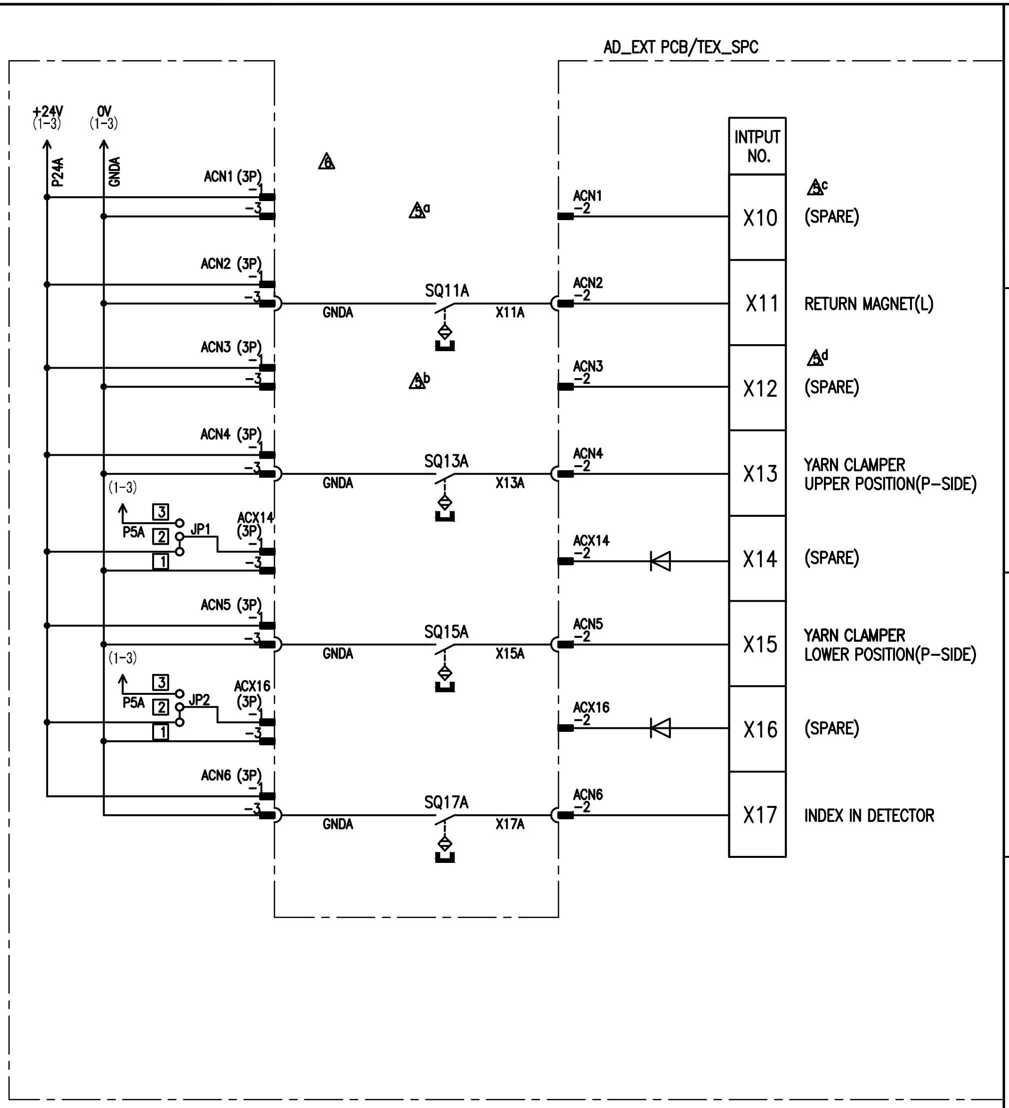

AD_I/F PCB
AD_I/F PCB
TEX_SPC
+24V (1-1)
0V (1-1)
P24C
GNDA
ACN28 (3P) -1 -3
SQ008A
X08A
ACN28 -2
CN15 -32
INTPUT NO.
X08 PACKAGE DETECTOR (UNIT BACK)
ACX009(3P) SQ009A X09A ACX009 -2 -31
X09 HUMAN DETECTOR(R) UPPER
(1-5) -30
X0A TRAVELING MOTOR ALARM
ACN29 (3P) SQ00BA X0BA ACN29 -2 -29
X0B HUMAN DETECTOR(R) LOWER
ACN30 (3P) ACN30 -2 -28
X0C (SPARE)
ACN31 (3P) SQ0DA X0DA ACN31 -2 -27
X0D RETURN MAGNET(R)
ACX00E(3P) ACX00E -2 -26
X0E (SPARE)
ACX00F(3P) ACX00F -2 (NC) STEPPING MOTOR ALARM DETECTION CIRCUIT -25
X0F STEPPING MOTOR ALARM (M102~104)
(1-1) P24A -23,24
XCOM +24V

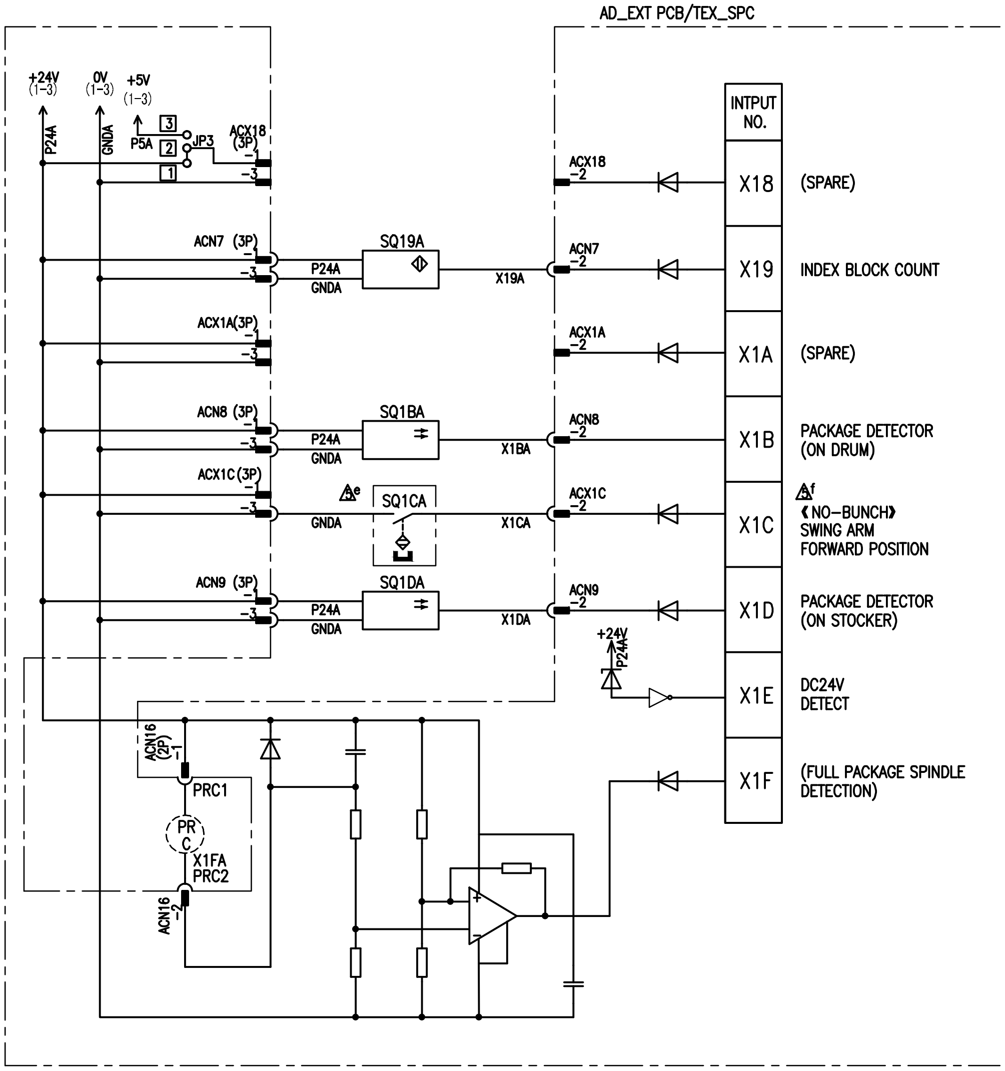
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~b | 17-09-28 | | パンチ無し仕様追加 | 21 | 春日 | | ~ | | | | | |
| 2 | ~ | 16-01-12 | | レイアウト修正 | 20 | 春日 | | ~ | | | | | |
| 1 | ~ | 12-02-08 | | 誤記修正、線番追加 | 20 | 福沢 | 4 | ~ | 18-11-20 | | シンボル置換え | 21 | 春日 |

APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHECKED | 2018-11-20 | K.KAWAMOTO | MACHINE | 9CD | NAME | SEQUENCE DIAGRAM (INPUT) | 2 |
| DESIGNED | 2011-12-08 | T.IKEMOTO | SCALE | | DRW.NO | 9CD-Q001B-21 | 104 |
| DRAWN | 2011-12-08 | M.YOSHIDA | サイズ SIZE | 2 | | | |

muratec MURATA MACHINERY, LTD.


AD_EXT PCB/TEX_SPC
+24V (1-3)
0V (1-3)
P24A
GNDA
ACN1 (3P) -1 -3
ACN1 -2
X10 (SPARE)
ACN2 (3P) -1 -3
GNDA
SQ11A
X11A
ACN2 -2
X11 RETURN MAGNET(L)
ACN3 (3P) -1 -3
ACN3 -2
X12 (SPARE)
ACN4 (3P) -1 -3
SQ13A
X13A
ACN4 -2
X13 YARN CLAMPER UPPER POSITION(P-SIDE)
(1-3)
P5A
3 2 1
JP1
ACX14 (3P) -1 -3
ACX14 -2
X14 (SPARE)
ACN5 (3P) -1 -3
SQ15A
X15A
ACN5 -2
X15 YARN CLAMPER LOWER POSITION(P-SIDE)
(1-3)
P5A
JP2
ACX16 (3P) -1 -3
ACX16 -2
X16 (SPARE)
ACN6 (3P) -1 -3
SQ17A
X17A
ACN6 -2
X17 INDEX IN DETECTOR
INTPUT NO.
6
a
b
c
d

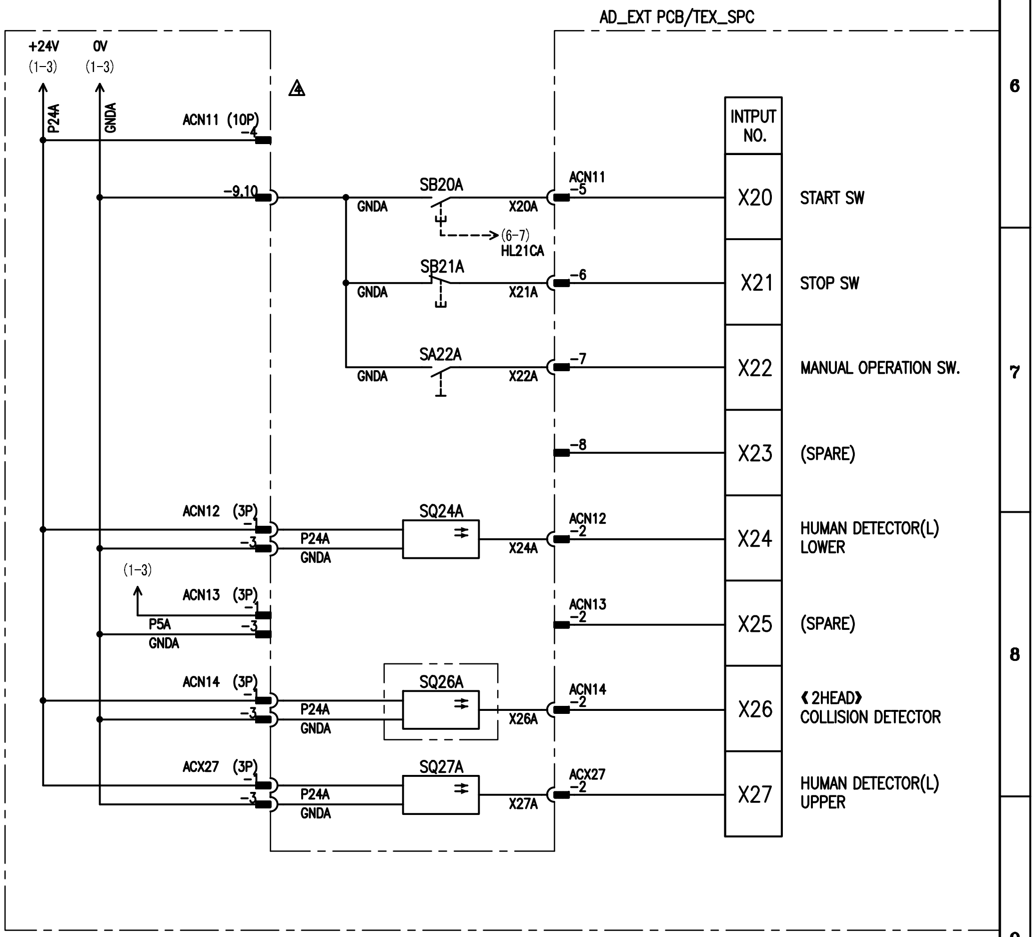

AD_EXT PCB/TEX_SPC
+24V (1-3)
0V (1-3)
+5V (1-3)
P24A
GNDA
P5A
3 2 1
JP3
ACX18 (3P) -1 -3
ACX18 -2
X18 (SPARE)
ACN7 (3P) -1 -3
P24A
GNDA
SQ19A
X19A
ACN7 -2
X19 INDEX BLOCK COUNT
ACX1A(3P) -1 -3
ACX1A -2
X1A (SPARE)
ACN8 (3P) -1 -3
SQ1BA
X1BA
ACN8 -2
X1B PACKAGE DETECTOR (ON DRUM)
ACX1C (3P) -1 -3
e
SQ1CA
X1CA
ACX1C -2
f
X1C 《NO-BUNCH》 SWING ARM FORWARD POSITION
ACN9 (3P) -1 -3
SQ1DA
X1DA
ACN9 -2
X1D PACKAGE DETECTOR (ON STOCKER)
+24V
P24A
X1E DC24V DETECT
ACN16 (2P) -1
PRC1
PR C
X1FA PRC2
ACN16 -2
+
-
X1F (FULL PACKAGE SPINDLE DETECTION)
INTPUT NO.

3

| | | | | | | | | | | | | | | 備考 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 13-12-19 | | 誤記修正 | 30 | 福沢 | 6 | ~ | 18-11-20 | | シンボル置換え | 31 | 春日 | APPENDIX |
| 2 | a~ k | 13-04-12 | | 誤記修正、線番追記 | 30 | 福沢 | 5 | a~ f | 17-09-28 | | パンチ無し仕様追加 | 31 | 春日 | |
| 1 | ~ | 12-02-08 | | 名称修正 | 30 | 福沢 | 4 | ~ | 16-01-12 | | レイアウト修正 | 30 | 春日 | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CD | 名称 NAME | SEQUENCE DIAGRAM (INPUT) |
| 検図 CHECKED | 2018 - 11 - 20 | K.KAWAMOTO | | | | |
| 設計 DESIGNED | 2011 - 12 - 01 | T.IKEMOTO | 尺度 SCALE | | 図番 DRW.NO | 9CD-Q001B-31 |
| 製図 DRAWN | 2011 - 12 - 01 | M.YOSHIDA | サイズ SIZE | 2 | | 106 |

MURATA MACHINERY, LTD.


AD_EXT PCB/TEX_SPC
+24V
(1-3)
0V
(1-3)
P24A
GNDA
ACN11 (10P)
-4
-9,10
GNDA
SB20A
X20A
(6-7)
HL21CA
ACN11
-5
GNDA
SB21A
X21A
-6
GNDA
SA22A
X22A
-7
-8
ACN12 (3P)
-1
-3
P24A
GNDA
SQ24A
X24A
ACN12
-2
(1-3)
ACN13 (3P)
-1
-3
P5A
GNDA
ACN13
-2
ACN14 (3P)
-1
-3
P24A
GNDA
SQ26A
X26A
ACN14
-2
ACX27 (3P)
-1
-3
P24A
GNDA
SQ27A
X27A
ACX27
-2
INTPUT NO.
X20
START SW
X21
STOP SW
X22
MANUAL OPERATION SW.
X23
(SPARE)
X24
HUMAN DETECTOR(L) LOWER
X25
(SPARE)
X26
《2HEAD》 COLLISION DETECTOR
X27
HUMAN DETECTOR(L) UPPER

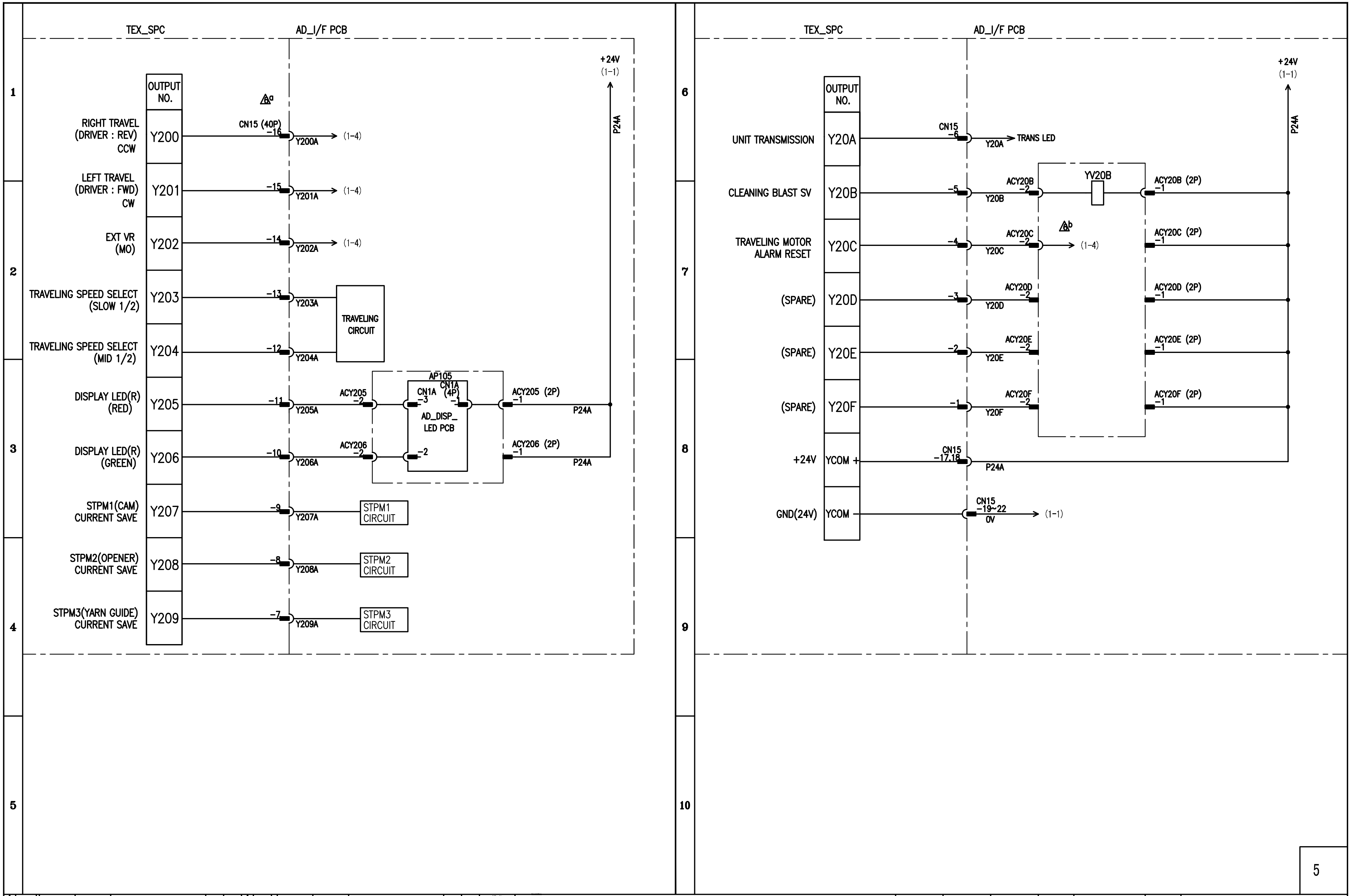
4

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 16-01-12 | | レイアウト修正 | 40 | 春日 | | ~ | | | | | |
| 2 | a~d | 13-04-12 | | 誤記修正、線番追記 | 40 | 福沢 | | ~ | | | | | |
| 1 | ~ | 12-02-08 | | 名称修正 | 40 | 福沢 | 4 | ~ | 18-11-20 | | シンボル置換え | 41 | 春日 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | MACHINE | 9CD | NAME | SEQUENCE DIAGRAM<br>(INPUT) |
| CHECKED | 2018-11-20 | K.KAWAMOTO | | | | |
| DESIGNED | 2011-11-08 | T.IKEMOTO | SCALE | | DRW.NO | 9CD-Q001B-41 |
| DRAWN | 2011-11-08 | M.YOSHIDA | SIZE | 2 | | 104 |

muratec MURATA MACHINERY, LTD.

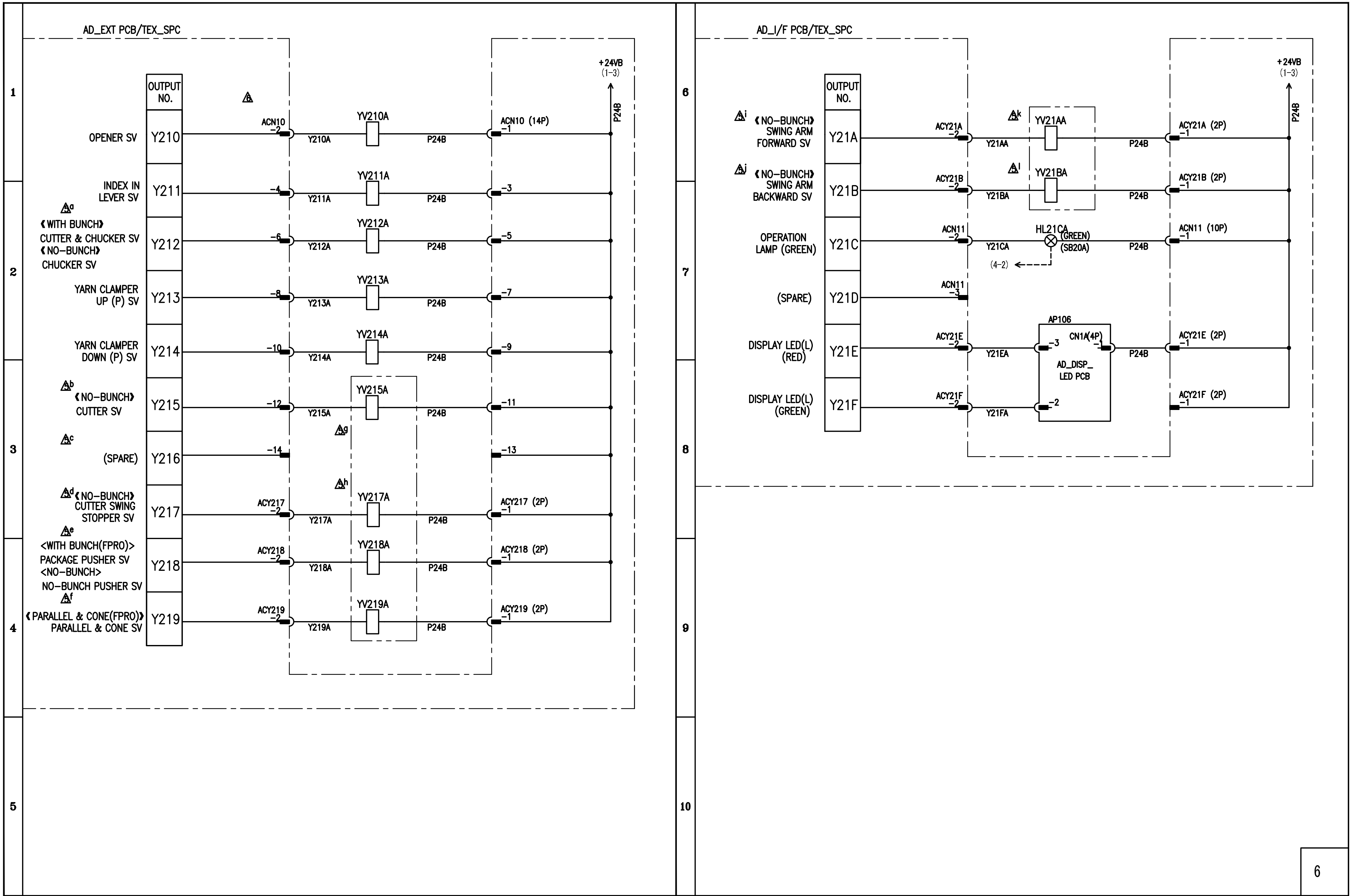

TEX_SPC
AD_I/F PCB
OUTPUT NO.
RIGHT TRAVEL (DRIVER : REV) CCW
Y200
CN15 (40P) -16
Y200A
(1-4)
LEFT TRAVEL (DRIVER : FWD) CW
Y201
-15
Y201A
EXT VR (MO)
Y202
-14
Y202A
TRAVELING SPEED SELECT (SLOW 1/2)
Y203
-13
Y203A
TRAVELING CIRCUIT
TRAVELING SPEED SELECT (MID 1/2)
Y204
-12
Y204A
DISPLAY LED(R) (RED)
Y205
-11
Y205A
ACY205 -2
AP105
CN1A -3
CN1A (4P) -1
AD_DISP_ LED PCB
ACY205 (2P) -1
P24A
DISPLAY LED(R) (GREEN)
Y206
-10
Y206A
ACY206 -2
-2
ACY206 (2P) -1
+24V (1-1)
STPM1(CAM) CURRENT SAVE
Y207
-9
Y207A
STPM1 CIRCUIT
STPM2(OPENER) CURRENT SAVE
Y208
-8
Y208A
STPM2 CIRCUIT
STPM3(YARN GUIDE) CURRENT SAVE
Y209
-7
Y209A
STPM3 CIRCUIT
6a
UNIT TRANSMISSION
Y20A
CN15 -6
TRANS LED
CLEANING BLAST SV
Y20B
-5
Y20B
ACY20B -2
YV20B
ACY20B (2P) -1
TRAVELING MOTOR ALARM RESET
Y20C
-4
ACY20C -2
6b
ACY20C (2P) -1
(SPARE)
Y20D
-3
ACY20D -2
ACY20D (2P) -1
(SPARE)
Y20E
-2
ACY20E -2
ACY20E (2P) -1
(SPARE)
Y20F
-1
ACY20F -2
ACY20F (2P) -1
+24V
YCOM +
CN15 -17,18
P24A
GND(24V)
YCOM -
CN15 -19~22
0V
(1-1)
1
2
3
4
5
6
7
8
9
10
5

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~d | 13-04-12 | | 線番追記 | 51 | 福沢 | 6 | a~b | 18-11-20 | ｼﾝﾎﾞﾙ置換え、走行ﾓｰﾀｱﾗｰﾑ解除追加 | 53 | 春日 |
| 2 | ~ | 12-02-08 | | 名称修正 | 51 | 福沢 | 5 | ~ | 16-01-12 | レイアウト修正 | 52 | 春日 |
| 1 | a~e | 12-01-31 | | コネクタ名・ピンNo.修正 | 51 | 福沢 | 4 | a~b | 13-10-30 | オプション仕様追加 | 52 | 福沢 |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018-11-20 | K.KAWAMOTO | 機種 MACHINE | 9CD | 名称 NAME | SEQUENCE DIAGRAM (OUTPUT) |
| DESIGNED | 2011-12-01 | T.IKEMOTO | 尺度 SCALE | | 図番 DRW.NO | 9CD-Q001B-53 / 306 |
| DRAWN | 2011-12-01 | M.YOSHIDA | サイズ SIZE | 2 | | |

muratec MURATA MACHINERY, LTD.


1
2
3
4
5
6
7
8
9
10
AD_EXT PCB/TEX_SPC
OUTPUT NO.
6
+24VB (1-3)
P24B
OPENER SV
Y210
ACN10 -2
Y210A
YV210A
P24B
ACN10 (14P) -1
INDEX IN LEVER SV
Y211
-4
Y211A
YV211A
P24B
-3
5a
《WITH BUNCH》 CUTTER & CHUCKER SV
《NO-BUNCH》 CHUCKER SV
Y212
-6
Y212A
YV212A
P24B
-5
YARN CLAMPER UP (P) SV
Y213
-8
Y213A
YV213A
P24B
-7
YARN CLAMPER DOWN (P) SV
Y214
-10
Y214A
YV214A
P24B
-9
5b
《NO-BUNCH》 CUTTER SV
Y215
-12
Y215A
YV215A
P24B
-11
5c
(SPARE)
Y216
-14
-13
5g
5h
5d
《NO-BUNCH》 CUTTER SWING STOPPER SV
Y217
ACY217 -2
Y217A
YV217A
P24B
ACY217 (2P) -1
5e
<WITH BUNCH(FPRO)> PACKAGE PUSHER SV
<NO-BUNCH> NO-BUNCH PUSHER SV
Y218
ACY218 -2
Y218A
YV218A
P24B
ACY218 (2P) -1
5f
《PARALLEL & CONE(FPRO)》 PARALLEL & CONE SV
Y219
ACY219 -2
Y219A
YV219A
P24B
ACY219 (2P) -1
AD_I/F PCB/TEX_SPC
OUTPUT NO.
+24VB (1-3)
P24B
5i
《NO-BUNCH》 SWING ARM FORWARD SV
Y21A
ACY21A -2
Y21AA
5k
YV21AA
P24B
ACY21A (2P) -1
5j
《NO-BUNCH》 SWING ARM BACKWARD SV
Y21B
ACY21B -2
Y21BA
5l
YV21BA
P24B
ACY21B (2P) -1
OPERATION LAMP (GREEN)
Y21C
ACN11 -2
Y21CA
HL21CA (GREEN) (SB20A)
(4-2)
P24B
ACN11 (10P) -1
(SPARE)
Y21D
ACN11 -3
DISPLAY LED(L) (RED)
Y21E
ACY21E -2
Y21EA
AP106
CN1A(4P)
-3
-1
AD_DISP_ LED PCB
P24B
ACY21E (2P) -1
DISPLAY LED(L) (GREEN)
Y21F
ACY21F -2
Y21FA
-2
ACY21F (2P) -1

6

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~j | 13-04-12 | | オプション仕様追加,誤記修正 | 62 | 福沢 | 6 | ~ | 18-11-20 | | シンボル置換え | 64 | 春日 |
| 2 | ~ | 12-02-08 | | 名称修正 | 61 | 福沢 | 5 | a~l | 17-10-02 | | バンチ無し仕様追加 | 64 | 春日 |
| 1 | a~e | 12-01-31 | | コネクタ名・ピンNo.修正 | 61 | 福沢 | 4 | a~b | 16-01-12 | | パラ/コーン兼用仕様追加、レイアウト修正 | 63 | 春日 |

備考
APPENDIX

| | | | | |
|---|---|---|---|---|
| 検図 CHECKED | 2018-11-20 | K.KAWAMOTO | 機種 MACHINE | 9CD |
| 設計 DESIGNED | 2011-11-14 | T.IKEMOTO | 尺度 SCALE | |
| 製図 DRAWN | 2011-11-14 | M.YOSHIDA | サイズ SIZE | 2 |

名称 NAME: SEQUENCE DIAGRAM (OUTPUT)

図番 DRW.NO: 9CD-Q001B-64 | 406

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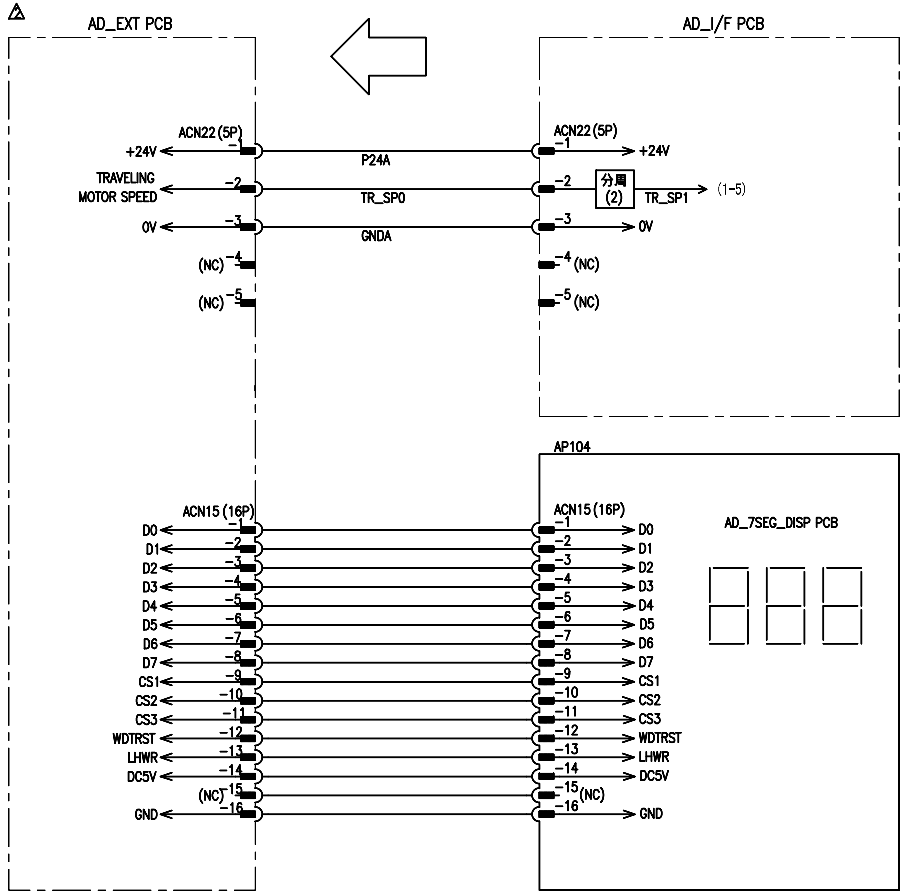
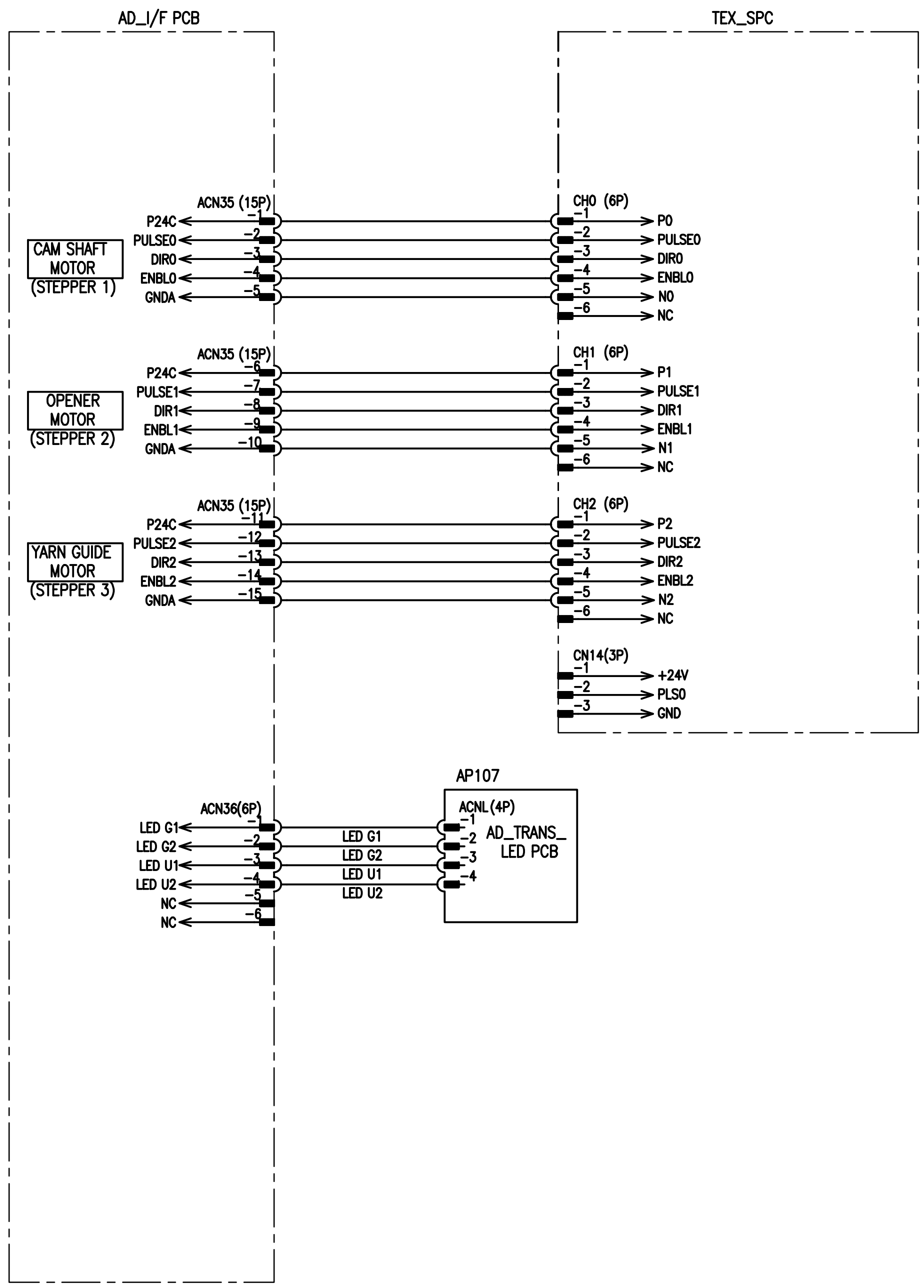

AD_EXT PCB
AD_I/F PCB
ACN22 (5P)
+24V
TRAVELING MOTOR SPEED
0V
(NC)
P24A
TR_SP0
GNDA
分周 (2)
TR_SP1
(1-5)
AP104
AD_7SEG_DISP PCB
ACN15 (16P)
D0
D1
D2
D3
D4
D5
D6
D7
CS1
CS2
CS3
WDTRST
LHWR
DC5V
GND


AD_I/F PCB
TEX_SPC
CAM SHAFT MOTOR (STEPPER 1)
OPENER MOTOR (STEPPER 2)
YARN GUIDE MOTOR (STEPPER 3)
ACN35 (15P)
P24C
PULSE0
DIR0
ENBL0
GNDA
PULSE1
DIR1
ENBL1
PULSE2
DIR2
ENBL2
CH0 (6P)
P0
N0
NC
CH1 (6P)
P1
N1
CH2 (6P)
P2
N2
CN14(3P)
+24V
PLS0
GND
AP107
ACN36(6P)
ACNL(4P)
AD_TRANS_ LED PCB
LED G1
LED G2
LED U1
LED U2
NC

| | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| 2 | ~ | 18-11-20 | | シンボル置換え | 71 | 春日 | | ~ | | | | | |
| 1 | ~ | 12-02-08 | | 名称修正 | 70 | 福沢 | | ~ | | | | | |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2018 - 11 - 20 | K.KAWAMOTO | 機種 MACHINE | 9CD | 名称 NAME | SEQUENCE DIAGRAM (SIGNAL) | |
| 設計 DESIGNED | 2011 - 12 - 01 | T.IKEMOTO | 尺度 SCALE | | 図番 DRW.NO | 9CD-Q001B-71 | 102 |
| 製図 DRAWN | 2011 - 12 - 01 | M.YOSHIDA | サイズ SIZE | 2 | | | |

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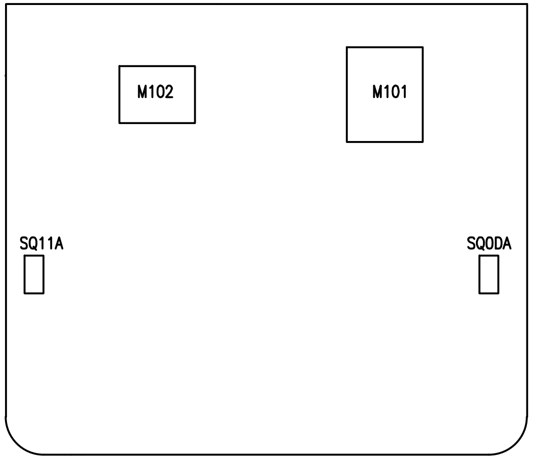
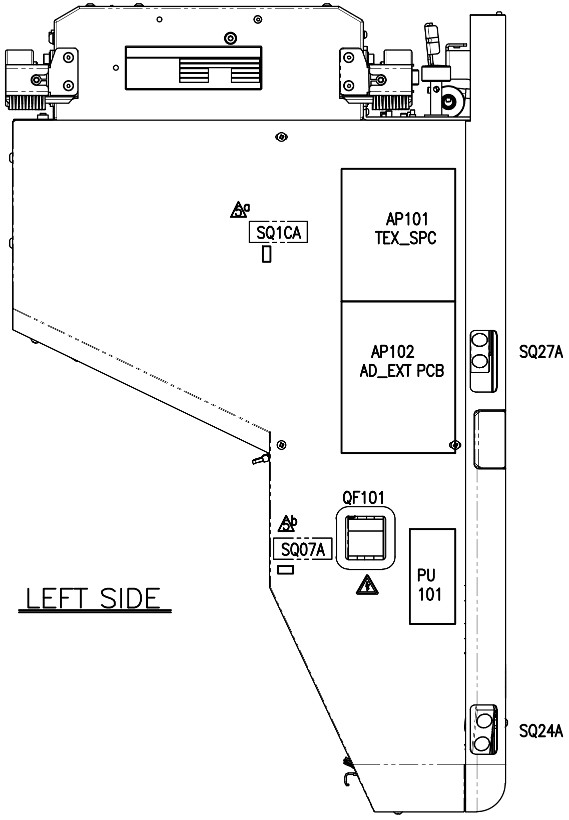
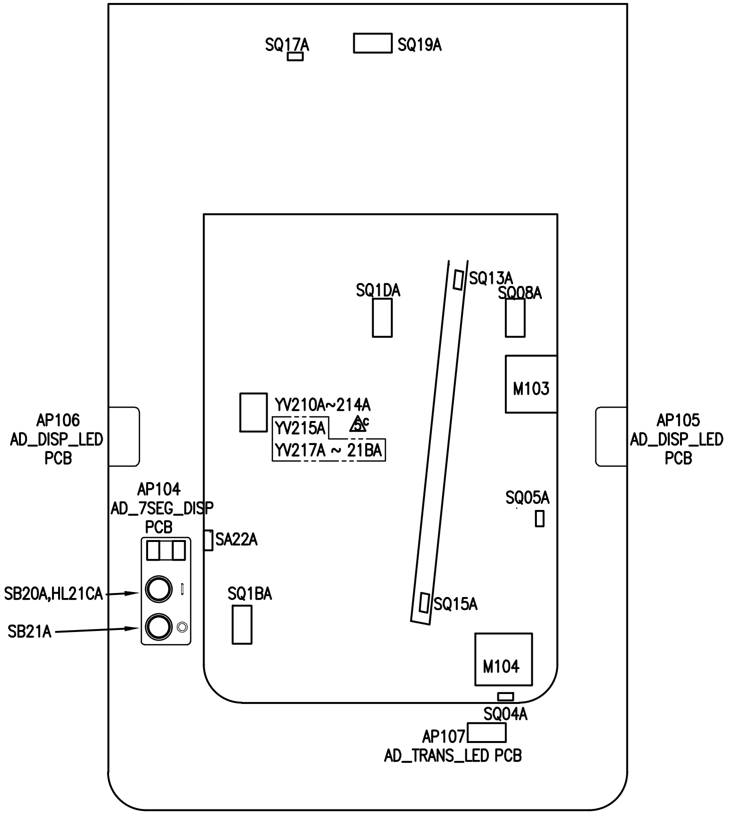
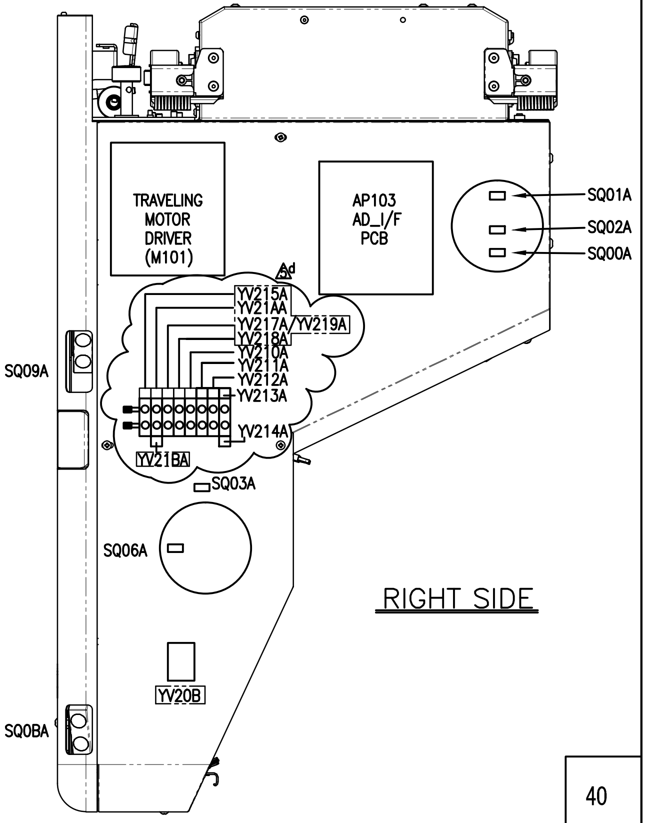
UPPER SIDE


M102
M101
SQ11A
SQ0DA


△a
SQ1CA
AP101
TEX_SPC
AP102
AD_EXT PCB
SQ27A
QF101
△b
SQ07A
PU
101
SQ24A

LEFT SIDE


SQ17A
SQ19A
SQ1DA
SQ13A
SQ08A
M103
AP106
AD_DISP_LED
PCB
YV210A~214A
YV215A
△c
YV217A ~ 21BA
AP105
AD_DISP_LED
PCB
AP104
AD_7SEG_DISP
PCB
SA22A
SQ05A
SB20A,HL21CA
SB21A
SQ1BA
SQ15A
M104
SQ04A
AP107
AD_TRANS_LED PCB


TRAVELING
MOTOR
DRIVER
(M101)
AP103
AD_I/F
PCB
SQ01A
SQ02A
SQ00A
△d
YV215A
YV21AA
YV217A/YV219A
YV218A
YV210A
YV211A
YV212A
YV213A
YV214A
YV21BA
SQ09A
SQ03A
SQ06A
YV20B
SQ0BA

RIGHT SIDE

40

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 13-10-30 |  | OPTION用 SV追記 | 13 | 福沢 |  | ~ |  |  |  |  |  |
| 2 | a~b | 13-04-12 |  | OPTION用 SV追記 | 12 | 福沢 | 5 | a~d | 17-10-03 |  | パンチ無し仕様追加 | 15 | 春日 |
| 1 | ~ | 12-01-26 |  | 配置変更 | 11 | 福沢 | 4 | a~c | 15-12-21 |  | パラ/コーン兼用 SV追記、誤記修正 | 14 | 春日 |

備考 APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  |  |  | 機種 MACHINE | 9CD | 名称 NAME | CONSTRUCTION DIAGRAM<br>(AD FRAME) |
| 検図 CHECKED | 2017 -10 -03 | K.KAWAMOTO |  |  |  |  |
| 設計 DESIGNED | 2011 -12 -02 | T.IKEMOTO | 尺度 SCALE |  | 図番 DRW.NO | 9CD-Q001C-15 |
| 製図 DRAWN | 2011 -12 -02 | M.YOSHIDA | サイズ SIZE | 2 |  | 505 |

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ROTARY SW

| SW | NOTE | SETTING |
|---|---|---|
| SW4 | ADDRESS SETTING UPPER FIGURE BCD(0~9)<br>アドレス設定　上位BCD(0~9) | 0 |
| SW5 | ADDRESS SETTING LOWER FIGURE BCD(0~9)<br>アドレス設定　下位BCD(0~9) | AD1:1<br>AD2:2 |

<2HEAD>

SW2 DIP SW

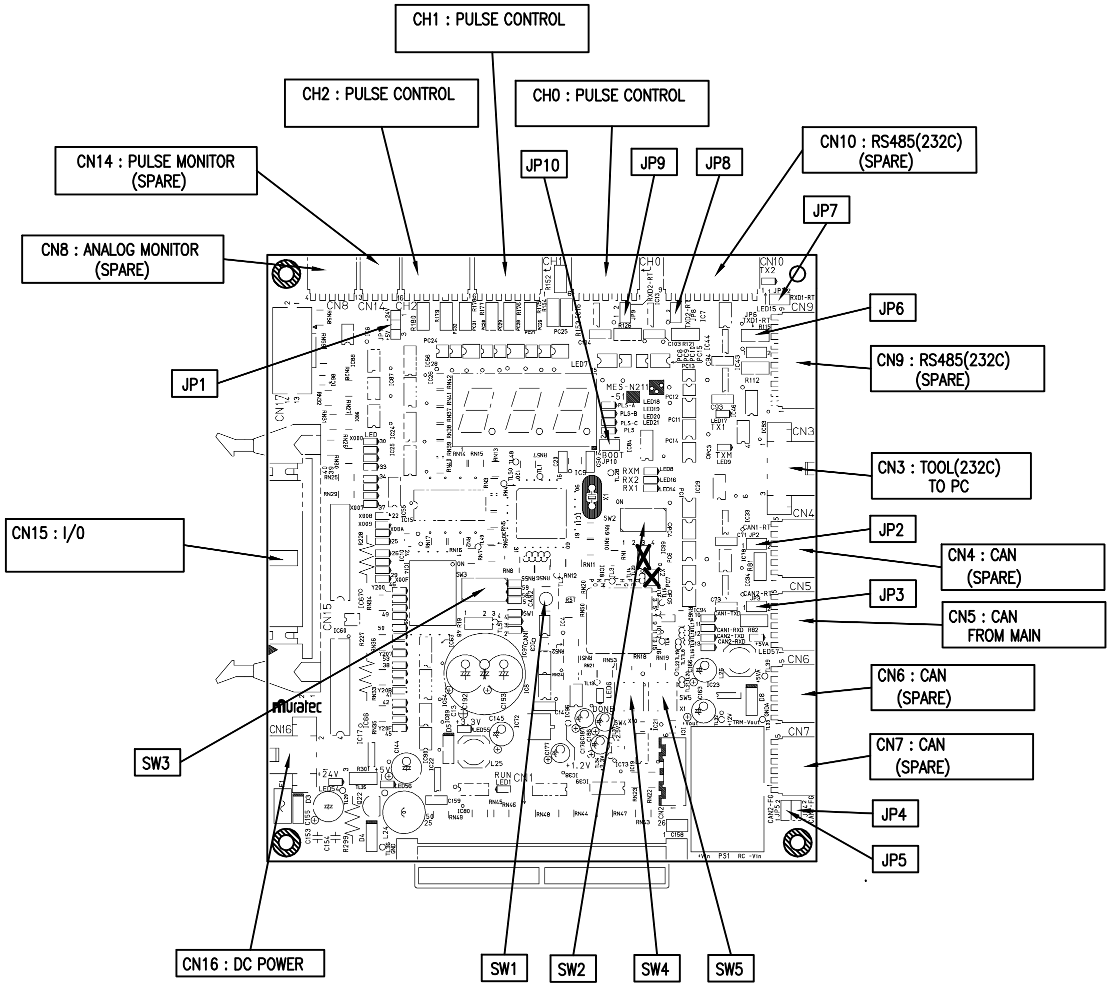
| BIT | NOTE | SETTING |
|---|---|---|
| 1 | NO USE | OFF |
| 2 | NO USE | OFF |
| 3 | NO USE | OFF |
| 4 | NO USE | OFF |

SW3 DIP SW

| BIT | NOTE | SETTING |
|---|---|---|
| 1 | ON-ERASE SRAM BACKUP DATA/OFF-NORMAL<br>ON-SRAMバックアップデータ消去／OFF-通常運転 | OFF |
| 2 | COLD START : ON-START/OFF-NORMAL<br>コールドスタート ：ON-起動／OFF-通常 | OFF |
| 3 | SYSTEM PROGRAM DOWNLOAD MODE : ON-DOWNLOAD/OFF-NORMAL<br>システムプログラムダウンロード ：ON-ダウンロード／OFF-通常 | OFF |
| 4 | LADDER PROGRAM BOOT : ON-STOP/OFF-RUN<br>ラダープログラムブート ：ON-停止／OFF-起動 | OFF |

JUMPER SETTING

|  | NOTE | SETTING |
|---|---|---|
| JP1 | ANALOG MONITOR SENSOR POWER VOLTAGE SELECT : +5V/+24V<br>アナログ電圧モニター電源電圧選択 ：1-2 ON・・・+24V/2-3 ON・・・+5V | 1-2 ON △a |
| JP2 | CAN1 TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>CAN1 ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | ON |
| JP3 | CAN2 TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>CAN2 ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | OFF |
| JP4(FG) | CAN1 SHIELD LINE : ON-SHIELD LINE JOINT TO FG/OFF-OPEN<br>CAN1シールド接地 ：ON-シールドをFGに接地／OFF-開放 | ON |
| JP5(FG) | CAN2 SHIELD LINE : ON-SHIELD LINE JOINT TO FG/OFF-OPEN<br>CAN2シールド接地 ：ON-シールドをFGに接地／OFF-開放 | OFF |
| JP6 | RS485-1CH TXD TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>RS485-1CH 送信側ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | OFF |
| JP7 | RS485-1CH RXD TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>RS485-1CH 受信側ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | OFF |
| JP8 | RS485-2CH TXD TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>RS485-2CH 送信側ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | OFF |
| JP9 | RS485-2CH RXD TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>RS485-2CH 受信側ターミネーション抵抗 ：ON-ネットワークの終端／OFF-それ以外 | OFF |
| JP10 | BOOT MODE : ON-BOOT/OFF-NORMAL<br>ブートモード ：ON-ブートモード／OFF-通常 | OFF |


CH1 : PULSE CONTROL
CH2 : PULSE CONTROL
CH0 : PULSE CONTROL
CN14 : PULSE MONITOR (SPARE)
JP10
JP9
JP8
CN10 : RS485(232C) (SPARE)
JP7
CN8 : ANALOG MONITOR (SPARE)
JP6
CN9 : RS485(232C) (SPARE)
JP1
CN3 : TOOL(232C) TO PC
CN15 : I/O
JP2
CN4 : CAN (SPARE)
JP3
CN5 : CAN FROM MAIN
CN6 : CAN (SPARE)
SW3
CN7 : CAN (SPARE)
JP4
JP5
CN16 : DC POWER
SW1
SW2
SW4
SW5
muratec

△b △c

TEX-SPC MES-N2110-52*/62*

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| a | a~c | 12-01-17 |  | 表記追加、誤記修正 | 20 | 福沢 |  | ~ |  |  |  |  |  |

備考 APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| CHECKED | 2012 -01 - 17 | T.IKEMOTO | MACHINE | 9CD | NAME | SETTING DIAGRAM<br>(TEX SPC) |
| DESIGNED | 2011 - 12 - 01 | T.IKEMOTO | SCALE |  | DRW.NO | 9CD-Q001C-20 001 |
| DRAWN | 2011 - 12 - 01 | M.YOSHIDA | SIZE | 2 |  | Muratec MURATA MACHINERY. LTD. |

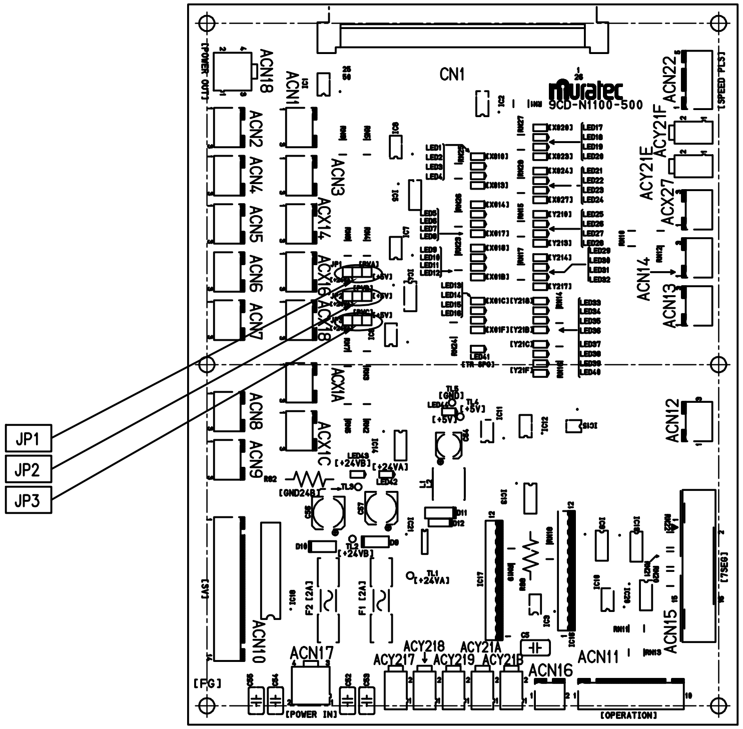
A-CAD V2

JUMPER SETTING

|  | NOTE | SETTING |
|---|---|---|
| JP1 | X014 INPUT POWER SELECT : 1−2 ON…+24VA/2−3 ON…+5V<br>X014 入力用電源切替　選択: 1−2 ON…+24V/2−3 ON…+5V | 1−2 ON |
| JP2 | X016 INPUT POWER SELECT : 1−2 ON…+24VA/2−3 ON…+5V<br>X016 入力用電源切替　選択: 1−2 ON…+24V/2−3 ON…+5V | 1−2 ON |
| JP3 | X018 INPUT POWER SELECT : 1−2 ON…+24VA/2−3 ON…+5V<br>X018 入力用電源切替　選択: 1−2 ON…+24V/2−3 ON…+5V | 1−2 ON |

△1a FUSE

|  | NOTE |
|---|---|
| F1 | AC250V 2A |
| F2 | AC250V 2A |


JP1
JP2
JP3
CN1
muratec
9CD-N1100-500
ACN18
[POWER OUT]
ACN1
ACN2
ACN3
ACN4
ACN5
ACN6
ACN7
ACN8
ACN9
ACN10
ACN11
ACN12
ACN13
ACN14
ACN15
ACN16
ACN17
ACN22
[SPEED PLS]
ACX14
ACX16
ACX18
ACX1A
ACX1C
ACX27
ACY21E
ACY21F
ACY217
ACY218
ACY219
ACY21A
ACY21B
F1 [2A]
F2 [2A]
[7SEG]
[FG]
[POWER IN]
[OPERATION]
[GND24B]
[+24VA]
[+24VB]
[+5V]

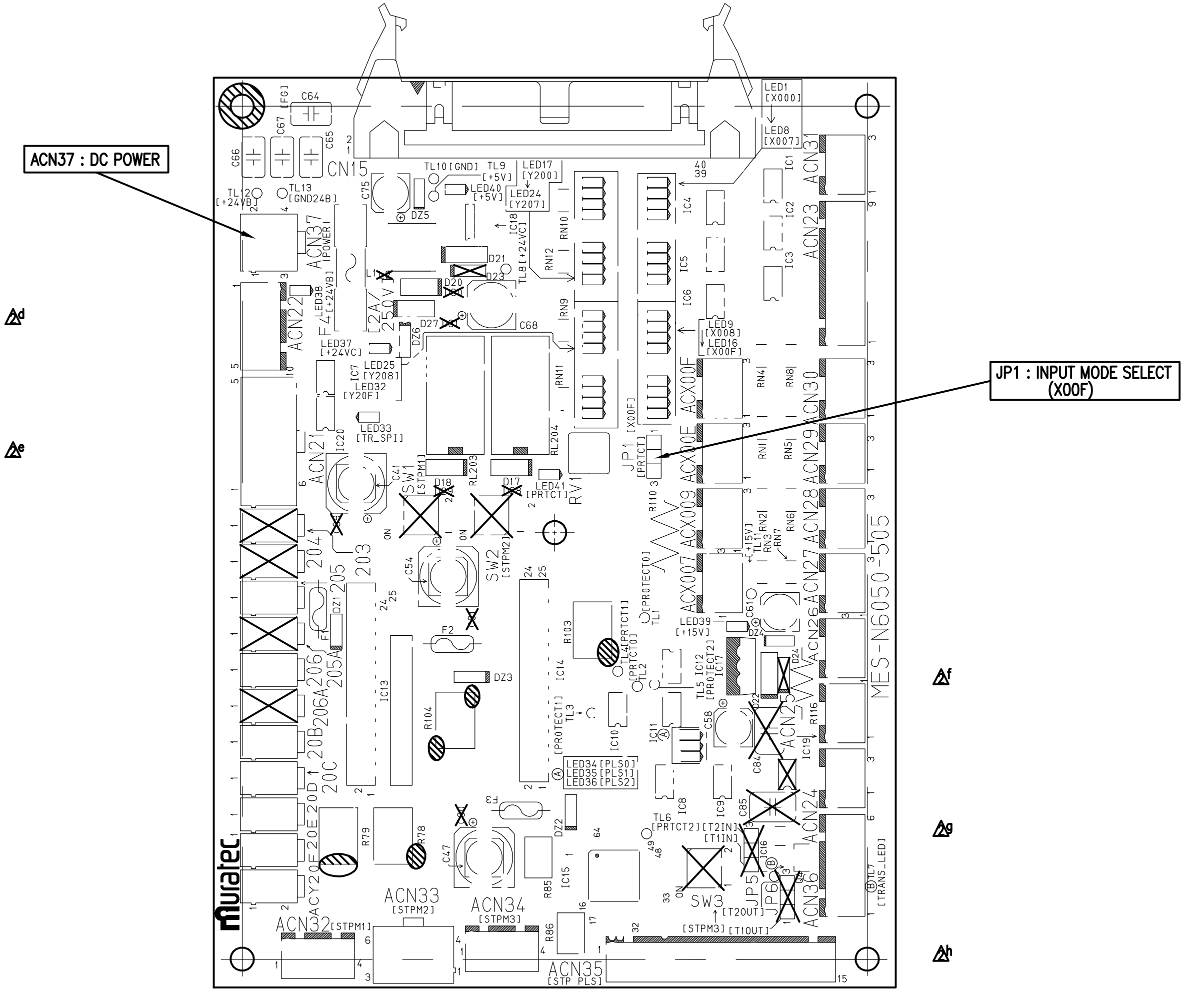
△2a △2b
△1b △1c

TEX_SPC_AD_EXT 9CD−N1100−50＊/60＊

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| △2 | a~b | 12−03−08 |  | 品番修正 | 30 | 福沢 |  | ~ |  |  |  |  |  |
| △1 | a~c | 12−01−17 |  | ヒューズ容量追加、誤記修正 | 30 | 福沢 |  | ~ |  |  |  |  |  |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  |  |  | 機種<br>MACHINE | 9CD | 名称<br>NAME | SETTING DIAGRAM<br>(TEX SPC AD EXT) |
| 検図<br>CHECKED | 2012 −03 − 08 | T.IKEMOTO |  |  |  |  |
| 設計<br>DESIGNED | 2011 −12 − 01 | T.IKEMOTO | 尺度<br>SCALE |  | 図番<br>DRW.NO | 9CD−Q001C−30　002 |
| 製図<br>DRAWN | 2011 −12 − 01 | M.YOSHIDA | サイズ<br>SIZE | 2 |  | muratec MURATA MACHINERY. LTD. |


ACN37 : DC POWER
JP1 : INPUT MODE SELECT (X00F)
MES-N6050-505
ACN37 [POWER]
CN15
ACN22
ACN21
ACN23
ACN30
ACN29
ACN28
ACN27
ACN26
ACN25
ACN24
ACN36
ACN31
ACN32 [STPM1]
ACN33 [STPM2]
ACN34 [STPM3]
ACN35 [STP PLS]
ACX00F
ACX009
ACX007
JP1 [PRTCT]
F4 2A 250V
SW1 [STPM1]
SW2 [STPM2]
SW3
RV1
muratec

JUMPER SETTING

| | NOTE | SETTING |
|---|---|---|
| JP1 | INPUT(X00F) MODE SELECT:1−2 ON…X00F INPUT/2−3 ON…DC MOTOR DRIVER ALARM<br>入力モード選択：1−2 ON…X00F入力，2−3 ON…DCモータドライバー異常入力 | 2−3 ON |

FUSE

| | NOTE |
|---|---|
| F4 | AC250V 2A |

## I/F PCB MES−N6050−50*/60*

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| 2 | a~h | 15-05-27 | | 未実装部品の設定表削除 | 41 | 福沢 | | ~ | | | | | |
| 1 | ~ | 12-01-17 | | ヒューズ容量追加 | 40 | 福沢 | | ~ | | | | | |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2015 -05 -27 | K.KAWAMOTO | 機種 MACHINE | 9CD | 名称 NAME | SETTING DIAGRAM (AD I/F) |
| 設計 DESIGNED | 2011 -12 -01 | T.IKEMOTO | 尺度 SCALE | | 図番 DRW.NO | 9CD−Q001C−41 102 |
| 製図 DRAWN | 2011 -12 -01 | M.YOSHIDA | サイズ SIZE | 2 | | muratec MURATA MACHINERY. LTD. |

A−CAD V4

SW1 DIP SW

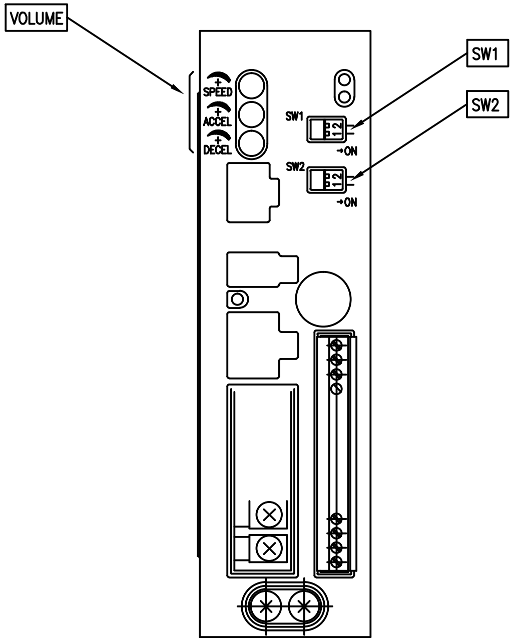
| BIT | NOTE | SETTING |
|---|---|---|
| 1 | NO USE<br>未使用 | OFF |
| 2 | FBL Ⅱ COMPATIBLE MODE : ON・・・VALID/ OFF・・・INVALID<br>FBL Ⅱ 互換モード : ON・・・互換モードが有効 / OFF・・・互換モードが無効 | ON |

SW2 DIP SW

|  | NOTE | SETTING |
|---|---|---|
| 1 | INPUT SIGNAL POWER : ON・・・BUILT-IN POWER / OFF・・・EXTERNAL POWER<br>入力信号用電源 : ON・・・ドライバー内蔵電源 / OFF・・・外部電源で制御 | OFF |
| 2 | EXTERNAL SPEED SETTING : ON・・・EXT.RESISTOR / OFF・・・BY DC10V<br>外部から速度設定する場合 : ON・・・外部抵抗で設定 / OFF・・・DC10Vで設定 | ON |

VOLUME SETTING

|  | SETTING |
|---|---|
| SPEED | Max. |
| ACCEL | 7 |
| DECEL | Min. |



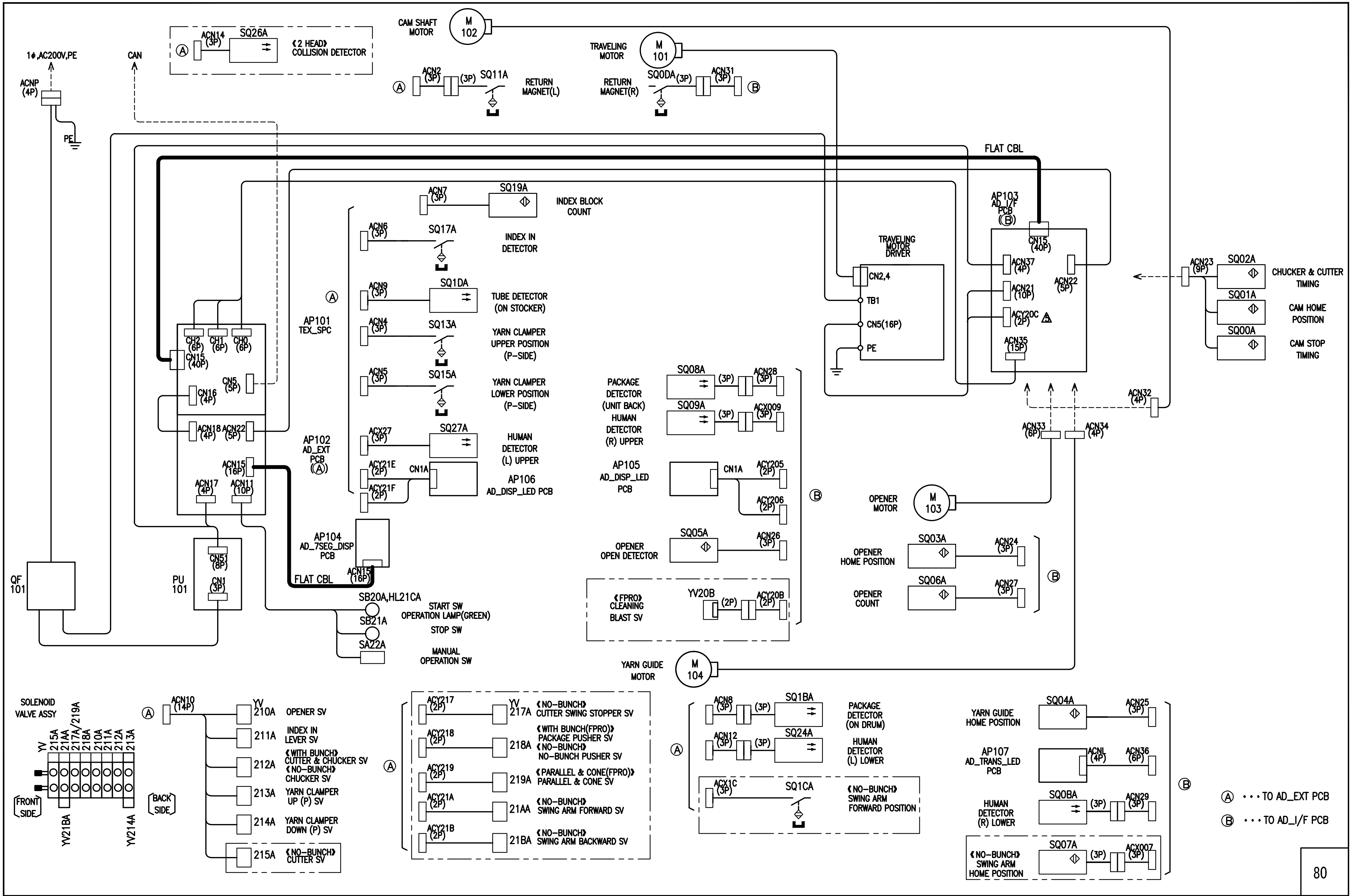
TRAVELING MOTOR DRIVER : BLE TYPE
(M101)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  |  |  | 機種<br>MACHINE | 9CD | 名称<br>NAME | SETTING DIAGRAM<br>(TRAVELING MOTOR DRV) |
| 検図<br>CHECKED | 2011 -12 - 01 | T.IKEMOTO |  |  |  |  |
| 設計<br>DESIGNED | 2011 -12 - 01 | T.IKEMOTO | 尺度<br>SCALE |  | 図番<br>DRW.NO | 9CD-Q001C-50 000 |
| 製図<br>DRAWN | 2011 -12 - 01 | M.YOSHIDA | サイズ<br>SIZE | 2 |  | Muratec MURATA MACHINERY. LTD. |

A-CAD V2


1φ,AC200V,PE
CAN
ACNP (4P)
PE
Ⓐ ACN14 (3P) SQ26A 《2 HEAD》 COLLISION DETECTOR
CAM SHAFT MOTOR
M 102
TRAVELING MOTOR
M 101
Ⓐ ACN2 (3P) (3P) SQ11A RETURN MAGNET(L)
RETURN MAGNET(R) SQ0DA (3P) ACN31 (3P) Ⓑ
FLAT CBL
ACN7 (3P) SQ19A INDEX BLOCK COUNT
ACN6 (3P) SQ17A INDEX IN DETECTOR
ACN9 (3P) SQ1DA TUBE DETECTOR (ON STOCKER)
ACN4 (3P) SQ13A YARN CLAMPER UPPER POSITION (P-SIDE)
ACN5 (3P) SQ15A YARN CLAMPER LOWER POSITION (P-SIDE)
ACX27 (3P) SQ27A HUMAN DETECTOR (L) UPPER
ACY21E (2P) CN1A
ACY21F (2P)
AP106 AD_DISP_LED PCB
Ⓐ
AP101 TEX_SPC
CH2 (6P) CH1 (6P) CH0 (6P)
CN15 (40P)
CN5 (5P)
CN16 (4P)
ACN18 (4P) ACN22 (5P)
AP102 AD_EXT PCB (Ⓐ)
ACN15 (16P)
ACN17 (4P) ACN11 (10P)
AP104 AD_7SEG_DISP PCB
ACN15 (16P)
FLAT CBL
QF 101
PU 101
CN51 (8P)
CN1 (3P)
SB20A,HL21CA START SW OPERATION LAMP(GREEN)
SB21A STOP SW
SA22A MANUAL OPERATION SW
TRAVELING MOTOR DRIVER
CN2,4
TB1
CN5(16P)
PE
AP103 AD_I/F PCB (Ⓑ)
CN15 (40P)
ACN37 (4P)
ACN22 (5P)
ACN21 (10P)
ACY20C (2P) △3
ACN35 (15P)
ACN23 (9P)
SQ02A CHUCKER & CUTTER TIMING
SQ01A CAM HOME POSITION
SQ00A CAM STOP TIMING
ACN32 (4P)
ACN33 (6P) ACN34 (4P)
PACKAGE DETECTOR (UNIT BACK) SQ08A (3P) ACN28 (3P)
HUMAN DETECTOR (R) UPPER SQ09A (3P) ACX009 (3P)
AP105 AD_DISP_LED PCB CN1A ACY205 (2P) ACY206 (2P)
OPENER OPEN DETECTOR SQ05A ACN26 (3P)
《FPRO》 CLEANING BLAST SV YV20B (2P) ACY20B (2P)
Ⓑ
OPENER MOTOR M 103
OPENER HOME POSITION SQ03A ACN24 (3P)
OPENER COUNT SQ06A ACN27 (3P)
Ⓑ
YARN GUIDE MOTOR M 104
SOLENOID VALVE ASSY
YV 215A 21AA 217A/219A 218A 210A 211A 212A 213A
FRONT SIDE
BACK SIDE
YV21BA
YV214A
Ⓐ ACN10 (14P)
YV 210A OPENER SV
211A INDEX IN LEVER SV
212A 《WITH BUNCH》 CUTTER & CHUCKER SV 《NO-BUNCH》 CHUCKER SV
213A YARN CLAMPER UP (P) SV
214A YARN CLAMPER DOWN (P) SV
215A 《NO-BUNCH》 CUTTER SV
Ⓐ
ACY217 (2P) YV 217A 《NO-BUNCH》 CUTTER SWING STOPPER SV
ACY218 (2P) 218A 《WITH BUNCH(FPRO)》 PACKAGE PUSHER SV 《NO-BUNCH》 NO-BUNCH PUSHER SV
ACY219 (2P) 219A 《PARALLEL & CONE(FPRO)》 PARALLEL & CONE SV
ACY21A (2P) 21AA 《NO-BUNCH》 SWING ARM FORWARD SV
ACY21B (2P) 21BA 《NO-BUNCH》 SWING ARM BACKWARD SV
Ⓐ
ACN8 (3P) (3P) SQ1BA PACKAGE DETECTOR (ON DRUM)
ACN12 (3P) (3P) SQ24A HUMAN DETECTOR (L) LOWER
ACX1C (3P) SQ1CA 《NO-BUNCH》 SWING ARM FORWARD POSITION
YARN GUIDE HOME POSITION SQ04A ACN25 (3P)
AP107 AD_TRANS_LED PCB ACNL (4P) ACN36 (6P)
HUMAN DETECTOR (R) LOWER SQ0BA (3P) ACN29 (3P)
《NO-BUNCH》 SWING ARM HOME POSITION SQ07A (3P) ACX007 (3P)
Ⓑ
Ⓐ ・・・TO AD_EXT PCB
Ⓑ ・・・TO AD_I/F PCB

80

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | a~c | 15-12-21 | | パラ/コーン兼用仕様追加 | 13 | 春日 | | ~ | | | | | | APPENDIX |
| △2 | a~b | 13-10-30 | | オプション仕様追加 | 12 | 福沢 | △5 | ~ | 18-11-20 | | 走行モータアラーム解除追加 | 15 | 春日 | |
| △1 | a~c | 13-04-12 | | オプション仕様追加,名称変更 | 11 | 福沢 | △4 | a~e | 17-10-03 | | バンチ無し仕様追加 | 14 | 春日 | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018-11-20 | K.KAWAMOTO | MACHINE | 9CD | NAME | WIRING DIAGRAM<br>(AD CIRCUIT) |
| DESIGNED | 2011-12-26 | T.IKEMOTO | SCALE | | DRW.NO | 9CD-Q001A-15 |
| DRAWN | 2011-12-26 | M.YOSHIDA | サイズ SIZE | 2 | | 505 |

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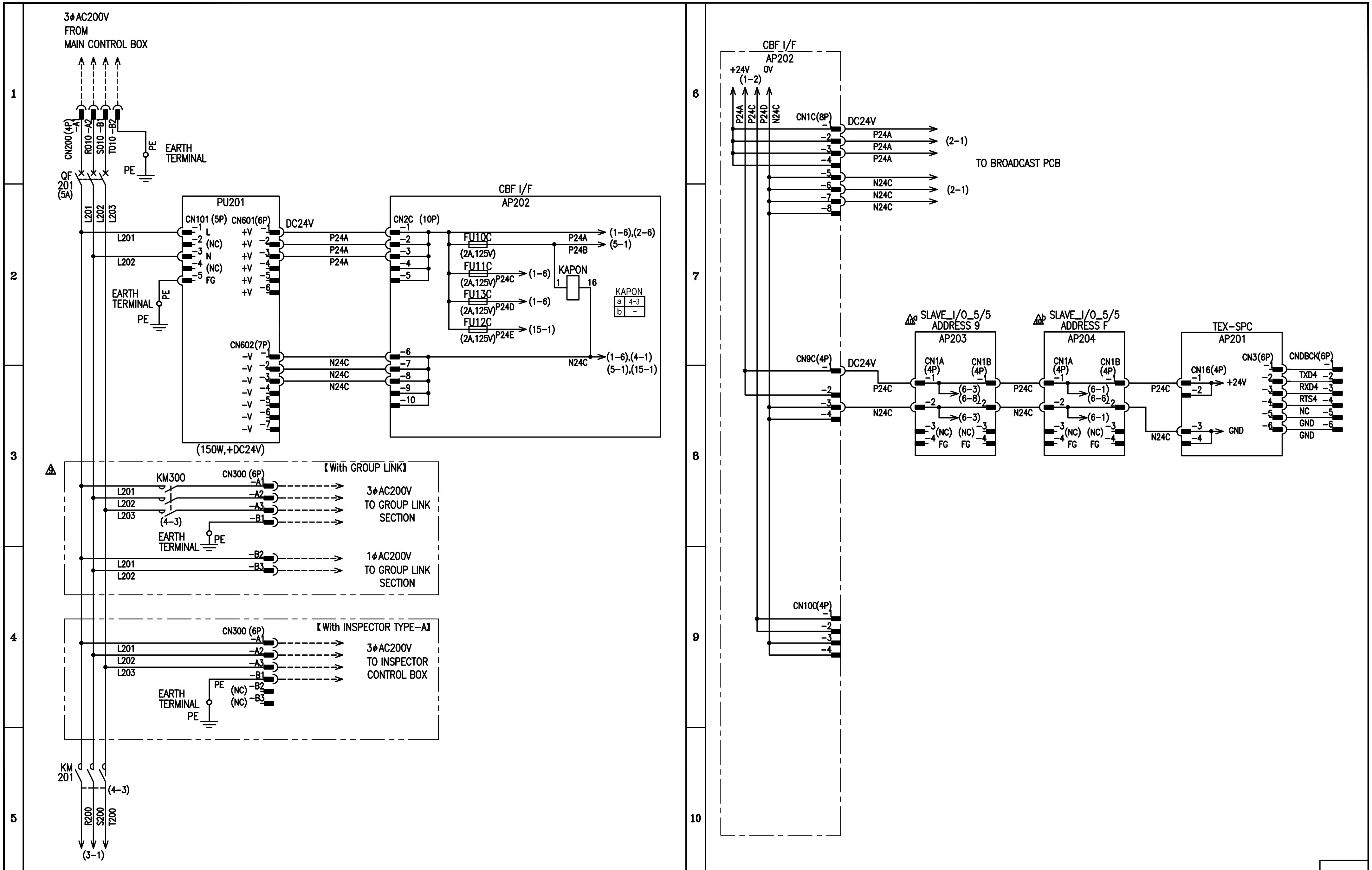
# Electrical Drawing List

**SERIAL No.** 20SX315730:001
**TYPE** 9CF
**Title** CBF(Tray to Tray)

| Drawing Name | Drawing No. |
|---|---|
| SEQUNCE DIAGRAM (POWER CIRCUIT) | 9CF-QL01B-18 |
| SEQUENCE DIAGRAM (POWER CIRCUIT) | 9CF-QL01B-27 |
| SEQUENCE DIAGRAM (MOTOR CIRCUIT) | 9CF-QL02B-31 |
| SEQUENCE DIAGRAM (CONTROL CIRCUIT) | 9CF-QL01B-50 |
| SEQUENCE DIAGRAM (I/O CIRCUIT) | 9CF-QL02B-71 |
| SEQUENCE DIAGRAM (I/O CIRCUIT OPERATION PANEL) | 9CF-QL01B-81 |
| SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE2) | 9CF-QL01B-93 |
| SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE3) | 9CF-QL01B-A2 |
| SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE6) | 9CF-QL02B-D0 |
| SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE7) | 9CF-QL01B-E4 |
| SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE8) | 9CF-QL01B-F4 |
| SEQUENCE DIAGRAM (CAN COMMUNICATION) | 9CF-QL01B-G5 |
| SEQUENCE DIAGRAM (POWER CIRCUIT) | 9CF-QL01B-H2 |
| CONSTRUCTION DIAGRAM (CBF CONTROL BOX) | 9CF-QL01C-16 |
| CONSTRUCTION DIAGRAM (OPERATION PANEL) | 9CF-QL01C-20 |
| CONSTRUCTION DIAGRAM (CBF FRAME 1K1C L-H) | 9CF-QL02C-30 |
| CONSTRUCTION DIAGRAM (CBF FRAME 1K1C R-H) | 9CF-QL02C-40 |
| CONSTRUCTION DIAGRAM (INTERFACE C/V) | 9CF-QL02C-70 |
| CONSTRUCTION DIAGRAM (COP-ROBO,STRIPPER) | 9CF-QL01C-83 |
| CONSTRUCTION DIAGRAM (BOBBIN EXCHANGER) | 9CF-QL02C-A0 |
| CONSTRUCTION DIAGRAM (TEX SPC) | 9CF-QL01C-B3 |
| CONSTRUCTION DIAGRAM (R-I/O SLAVE) | 9CF-QL01C-C4 |
| CONSTRUCTION DIAGRAM (SLAVE I/O 5/5) | 9CF-QL01C-D1 |
| CONSTRUCTION DIAGRAM (CBF I/F PCB) | 9CF-QL01C-E1 |
| CONSTRUCTION DIAGRAM (STEPPER DRIVER) | 9CF-QL01C-F2 |
| WIRING DIAGRAM (MAIN-CBF-INTERFACE C/V) | 9CF-QL01D-12 |
| WIRING DIAGRAM (CONTROL BOX) | 9CF-QL04A-15 |
| WIRING DIAGRAM (OPERATION PANEL) | 9CF-QL01A-20 |
| WIRING DIAGRAM (AC MOTOR) | 9CF-QL01A-41 |
| WIRING DIAGRAM (STEPPING MOTOR) | 9CF-QL01A-54 |

| Drawing Name | Drawing No. |
|---|---|
| WIRING DIAGRAM (SLAVE2) | 9CF-QL01A-63 |
| WIRING DIAGRAM (SLAVE3) | 9CF-QL01A-72 |
| WIRING DIAGRAM (SLAVE6) | 9CF-QL02A-A0 |
| WIRING DIAGRAM (SLAVE7) | 9CF-QL04A-B4 |
| WIRING DIAGRAM (SLAVE8) | 9CF-QL01A-C2 |
| DISPLAY DIAGRAM (TROUBLE DISPLAY SHEET) | 9CF-QL01E-11 |
| DISPLAY DIAGRAM (SPINNER SIGNAL SHEET) | 9CF-QL01E-22 |


1
2
3
4
5
6
7
8
9
10
3φAC200V
FROM
MAIN CONTROL BOX
CN200(4P)
-A1
R010 -A2
S010 -B1
T010 -B2
PE
EARTH
TERMINAL
PE
QF
201
(5A)
L201
L202
L203
PU201
CN101 (5P)
CN601(6P)
-1 L
-2 (NC)
-3 N
-4 (NC)
-5 FG
+V
DC24V
P24A
P24A
P24A
EARTH
TERMINAL
PE
CN602(7P)
-V
N24C
N24C
N24C
(150W,+DC24V)
CBF I/F
AP202
CN2C (10P)
FU10C
(2A,125V)
FU11C
(2A,125V)
P24C
FU13C
(2A,125V)
P24D
FU12C
(2A,125V)
P24E
P24A
P24B
(1-6),(2-6)
(5-1)
(1-6)
(1-6)
(15-1)
KAPON
1
16
KAPON
a 4-3
b -
N24C
(1-6),(4-1)
(5-1),(15-1)
【With GROUP LINK】
KM300
CN300 (6P)
-A1
-A2
-A3
-B1
-B2
-B3
L201
L202
L203
(4-3)
EARTH
TERMINAL
PE
3φAC200V
TO GROUP LINK
SECTION
1φAC200V
TO GROUP LINK
SECTION
【With INSPECTOR TYPE-A】
CN300 (6P)
3φAC200V
TO INSPECTOR
CONTROL BOX
EARTH
TERMINAL
PE
(NC)
(NC)
KM
201
(4-3)
R200
S200
T200
(3-1)
CBF I/F
AP202
+24V
0V
(1-2)
P24A
P24C
P24D
N24C
CN1C(8P)
DC24V
P24A
P24A
P24A
(2-1)
TO BROADCAST PCB
N24C
N24C
N24C
(2-1)
CN9C(4P)
DC24V
P24C
N24C
SLAVE_I/O_5/5
ADDRESS 9
AP203
CN1A
(4P)
CN1B
(4P)
(6-3)
(6-8)
(6-3)
(NC)
FG
SLAVE_I/O_5/5
ADDRESS F
AP204
(6-1)
(6-6)
(6-1)
P24C
N24C
TEX-SPC
AP201
CN16(4P)
+24V
GND
CN3(6P)
CNDBCK(6P)
TXD4
RXD4
RTS4
NC
GND
GND
P24C
N24C
CN10C(4P)
1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | a~b | 13-12-03 |  | SW電源変更，付帯情報追記 | 14 | 宮脇 |  |  |  |  |  |  |  |
| 4 | a~c | 13-09-04 |  | 新規CBF I/F基板対応 | 13 | 宮脇 | 10 | a~b | 20-03-13 |  | SLAVE飛び先の誤記訂正 | 18 | 福沢 |
| 3 | a~b | 12-11-26 |  | INSPECTOR TYPE-B追加,TYPE-A追加 | 12 | 宮脇 | 9 |  | 19-06-28 |  | GROUP LINK対応 | 18 | 福沢 |
| 2 | a~f | 12-07-10 |  | 誤記修正,線番追記 | 11 | 平野 | 8 | a~b | 18-11-09 |  | 冷却ファン削除､シンボル置換え | 17 | 福沢 |
| 1 | a~b | 12-02-02 |  | コネクタCN200 ピン番号追記 |  |  | 7 | ~ | 17-03-30 |  | 冷却ファンの追加 | 16 | 福沢 |
|  | ~ |  |  | インスペクター用電源ライン追加 | 11 | 平野 | 6 | a~c | 13-12-13 |  | 誤記修正,行先変更 | 15 | 宮脇 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CF | 名称 NAME | SEQUNCE DIAGRAM<br>(POWER CIRCUIT) | |
| 検図 CHECKED | 2020 - 03 - 13 | H.SHIMO | | | | | |
| 設計 DESIGNED | 2011 - 11 - 25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-18 | 80A |
| 製図 DRAWN | 2011 - 11 - 25 | K.HIRANO | サイズ SIZE | 2 | | | |

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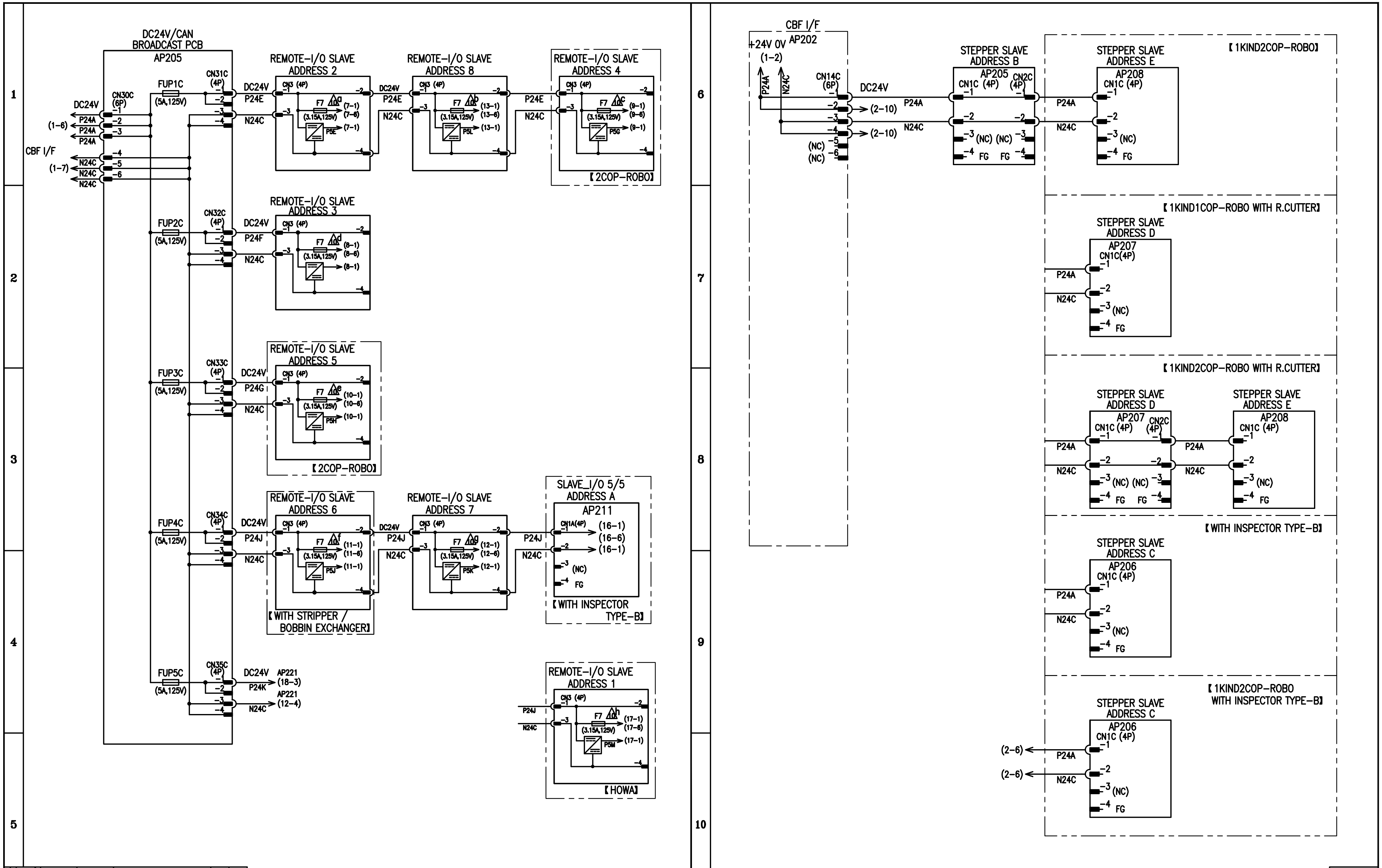
1
2
3
4
5
6
7
8
9
10
DC24V/CAN
BROADCAST PCB
AP205
DC24V
CN30C (6P)
-1 -2 -3 -4 -5 -6
P24A
P24A
P24A
(1-6)
CBF I/F
N24C
N24C
N24C
(1-7)
FUP1C (5A,125V)
CN31C (4P)
FUP2C (5A,125V)
CN32C (4P)
FUP3C (5A,125V)
CN33C (4P)
FUP4C (5A,125V)
CN34C (4P)
FUP5C (5A,125V)
CN35C (4P)
DC24V
P24E
N24C
REMOTE-I/O SLAVE ADDRESS 2
CN3 (4P)
F7 (3.15A,125V)
10 a
(7-1) (7-6)
P5E (7-1)
REMOTE-I/O SLAVE ADDRESS 8
10 b
(13-1) (13-6)
P5L (13-1)
REMOTE-I/O SLAVE ADDRESS 4
10 c
(9-1) (9-6)
P5G (9-1)
【2COP-ROBO】
REMOTE-I/O SLAVE ADDRESS 3
P24F
10 d
(8-1) (8-6)
(8-1)
REMOTE-I/O SLAVE ADDRESS 5
P24G
10 e
(10-1) (10-6)
P5H (10-1)
【2COP-ROBO】
REMOTE-I/O SLAVE ADDRESS 6
P24J
10 f
(11-1) (11-6)
P5J (11-1)
【WITH STRIPPER / BOBBIN EXCHANGER】
REMOTE-I/O SLAVE ADDRESS 7
10 g
(12-1) (12-6)
P5K (12-1)
SLAVE_I/O 5/5 ADDRESS A
AP211
CN1A(4P)
(16-1) (16-6) (16-1)
(NC)
FG
【WITH INSPECTOR TYPE-B】
DC24V
P24K
AP221 (18-3)
N24C
AP221 (12-4)
REMOTE-I/O SLAVE ADDRESS 1
P24J
N24C
10 h
(17-1) (17-6)
P5M (17-1)
【HOWA】
CBF I/F
AP202
+24V 0V
(1-2)
P24A
N24C
CN14C (6P)
DC24V
(2-10)
(2-10)
(NC)
(NC)
STEPPER SLAVE ADDRESS B
AP205
CN1C (4P)
CN2C (4P)
(NC) (NC)
FG FG
P24A
N24C
【1KIND2COP-ROBO】
STEPPER SLAVE ADDRESS E
AP208
CN1C (4P)
(NC)
FG
【1KIND1COP-ROBO WITH R.CUTTER】
STEPPER SLAVE ADDRESS D
AP207
CN1C(4P)
(NC)
FG
【1KIND2COP-ROBO WITH R.CUTTER】
STEPPER SLAVE ADDRESS D
AP207
CN1C (4P)
CN2C (4P)
STEPPER SLAVE ADDRESS E
AP208
CN1C (4P)
【WITH INSPECTOR TYPE-B】
STEPPER SLAVE ADDRESS C
AP206
CN1C (4P)
【1KIND2COP-ROBO WITH INSPECTOR TYPE-B】
STEPPER SLAVE ADDRESS C
AP206
CN1C (4P)
(2-6)
(2-6)

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|
| 5 | a～i | 12-12-13 | | 付帯情報の追記，行先変更<br>INSPECTOR TYPE-B 2コップロボ対応 | 24 | 宮脇 |
| 4 | a～c | 12-11-29 | | INSPECTOR TYPE-B追加<br>ストリッパー準備型対応 | 23 | 宮脇 |
| 3 | a～e | 12-10-12 | | CBFステッパー対応 | 22 | 平野 |
| 2 | a～c | 12-07-10 | | 誤記修正 | 21 | 平野 |
| 1 | a～b | 12-02-22 | | 2COP-ROBO対応 | 21 | 平野 |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|
| 10 | a～h | 20-03-13 | | SLAVEヒューズ追加 | 27 | 福沢 |
| 9 | | 18-10-05 | | ボビンエクスチェンジャー追記 | 26 | 福沢 |
| 8 | ～ | 18-01-19 | | 誤記訂正，シンボル置換え | 26 | 福沢 |
| 7 | ～ | 16-04-02 | | トップパンチ対応 | 26 | 平野 |
| 6 | ～ | 14-12-19 | | HOWA対応 | 25 | 平野 |

備考 APPENDIX

2

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-03-13 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM<br>(POWER CIRCUIT) |
| 設計 DESIGNED | 2011-11-25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-27 |
| 製図 DRAWN | 2011-11-25 | K.HIRANO | サイズ SIZE | 2 | | 710 |

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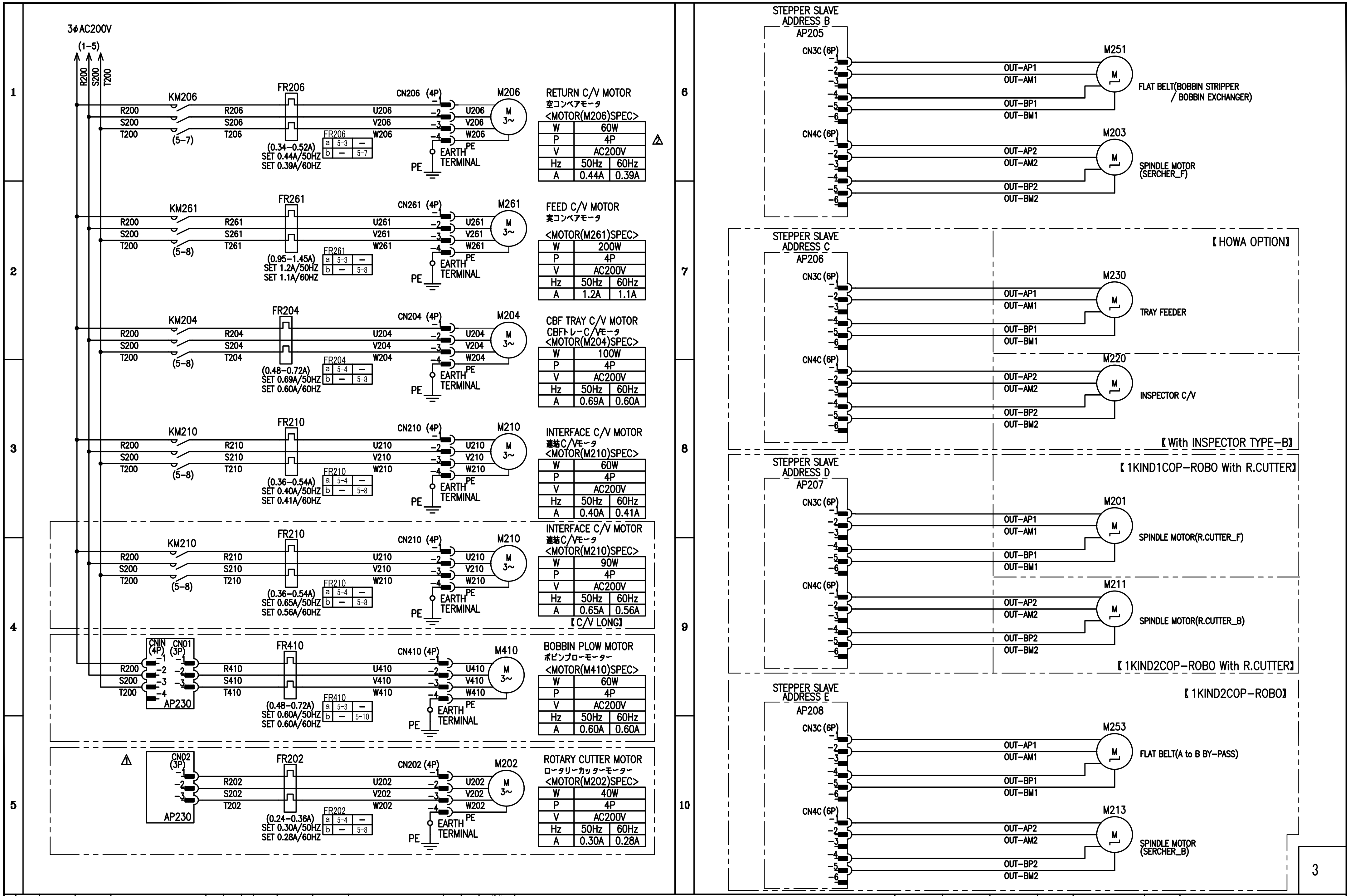
1
2
3
4
5
6
7
8
9
10
3φAC200V
(1-5)
R200
S200
T200
KM206
(5-7)
R206
S206
T206
FR206
(0.34-0.52A)
SET 0.44A/50HZ
SET 0.39A/60HZ
FR206
a 5-3 –
b – 5-7
CN206 (4P)
U206
V206
W206
M206
M
3~
EARTH
TERMINAL
PE
RETURN C/V MOTOR
空コンベアモータ
KM261
(5-8)
R261
S261
T261
FR261
(0.95-1.45A)
SET 1.2A/50HZ
SET 1.1A/60HZ
FR261
a 5-3 –
b – 5-8
CN261 (4P)
U261
V261
W261
M261
FEED C/V MOTOR
実コンベアモータ
KM204
R204
S204
T204
FR204
(0.48-0.72A)
SET 0.69A/50HZ
SET 0.60A/60HZ
FR204
a 5-4 –
b – 5-8
CN204 (4P)
U204
V204
W204
M204
CBF TRAY C/V MOTOR
CBFトレーC/Vモータ
KM210
R210
S210
T210
FR210
(0.36-0.54A)
SET 0.40A/50HZ
SET 0.41A/60HZ
FR210
a 5-4 –
b – 5-8
CN210 (4P)
U210
V210
W210
M210
INTERFACE C/V MOTOR
連結C/Vモータ
KM210
FR210
(0.36-0.54A)
SET 0.65A/50HZ
SET 0.56A/60HZ
CN210 (4P)
M210
INTERFACE C/V MOTOR
連結C/Vモータ
【C/V LONG】
CNIN (4P)
CN01 (3P)
AP230
R410
S410
T410
FR410
(0.48-0.72A)
SET 0.60A/50HZ
SET 0.60A/60HZ
FR410
a 5-3 –
b – 5-10
CN410 (4P)
U410
V410
W410
M410
BOBBIN PLOW MOTOR
ボビンプローモーター
CN02 (3P)
AP230
R202
S202
T202
FR202
(0.24-0.36A)
SET 0.30A/50HZ
SET 0.28A/60HZ
FR202
a 5-4 –
b – 5-8
CN202 (4P)
U202
V202
W202
M202
ROTARY CUTTER MOTOR
ロータリーカッターモーター
STEPPER SLAVE
ADDRESS B
AP205
CN3C (6P)
OUT-AP1
OUT-AM1
OUT-BP1
OUT-BM1
M251
FLAT BELT(BOBBIN STRIPPER / BOBBIN EXCHANGER)
CN4C (6P)
OUT-AP2
OUT-AM2
OUT-BP2
OUT-BM2
M203
SPINDLE MOTOR (SERCHER_F)
STEPPER SLAVE
ADDRESS C
AP206
【HOWA OPTION】
M230
TRAY FEEDER
M220
INSPECTOR C/V
【With INSPECTOR TYPE-B】
STEPPER SLAVE
ADDRESS D
AP207
【1KIND1COP-ROBO With R.CUTTER】
M201
SPINDLE MOTOR(R.CUTTER_F)
M211
SPINDLE MOTOR(R.CUTTER_B)
【1KIND2COP-ROBO With R.CUTTER】
STEPPER SLAVE
ADDRESS E
AP208
【1KIND2COP-ROBO】
M253
FLAT BELT(A to B BY-PASS)
M213
SPINDLE MOTOR (SERCHER_B)
3

<MOTOR(M206)SPEC>

| | | |
|---|---|---|
| W | 60W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.44A | 0.39A |

<MOTOR(M261)SPEC>

| | | |
|---|---|---|
| W | 200W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 1.2A | 1.1A |

<MOTOR(M204)SPEC>

| | | |
|---|---|---|
| W | 100W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.69A | 0.60A |

<MOTOR(M210)SPEC>

| | | |
|---|---|---|
| W | 60W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.40A | 0.41A |

<MOTOR(M210)SPEC>

| | | |
|---|---|---|
| W | 90W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.65A | 0.56A |

<MOTOR(M410)SPEC>

| | | |
|---|---|---|
| W | 60W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.60A | 0.60A |

<MOTOR(M202)SPEC>

| | | |
|---|---|---|
| W | 40W | |
| P | 4P | |
| V | AC200V | |
| Hz | 50Hz | 60Hz |
| A | 0.30A | 0.28A |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| △2 | ~ | 20-03-18 | | モーター属性追記 | 31 | 福沢 | | ~ | | | | | |
| △1 | ~ | 19-04-05 | | ロータリーカッター追加 | 31 | 福沢 | | ~ | | | | | |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020 - 03 - 18 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM (MOTOR CIRCUIT) |
| 設計 DESIGNED | 2018 - 10 - 03 | E.FUKUZAWA | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL02B-31 |
| 製図 DRAWN | 2018 - 10 - 03 | M.YOSHIDA | サイズ SIZE | 2 | | 102 |

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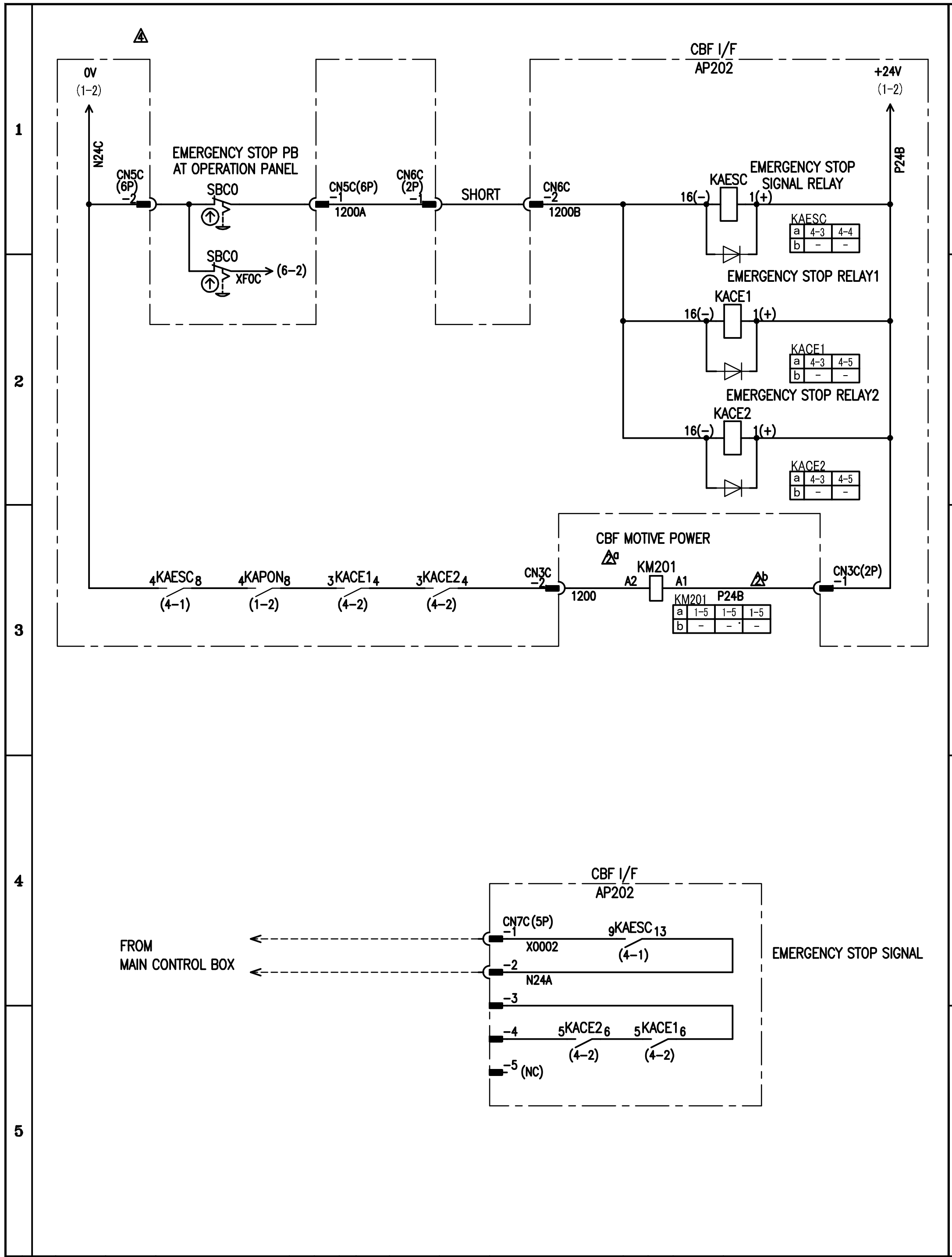
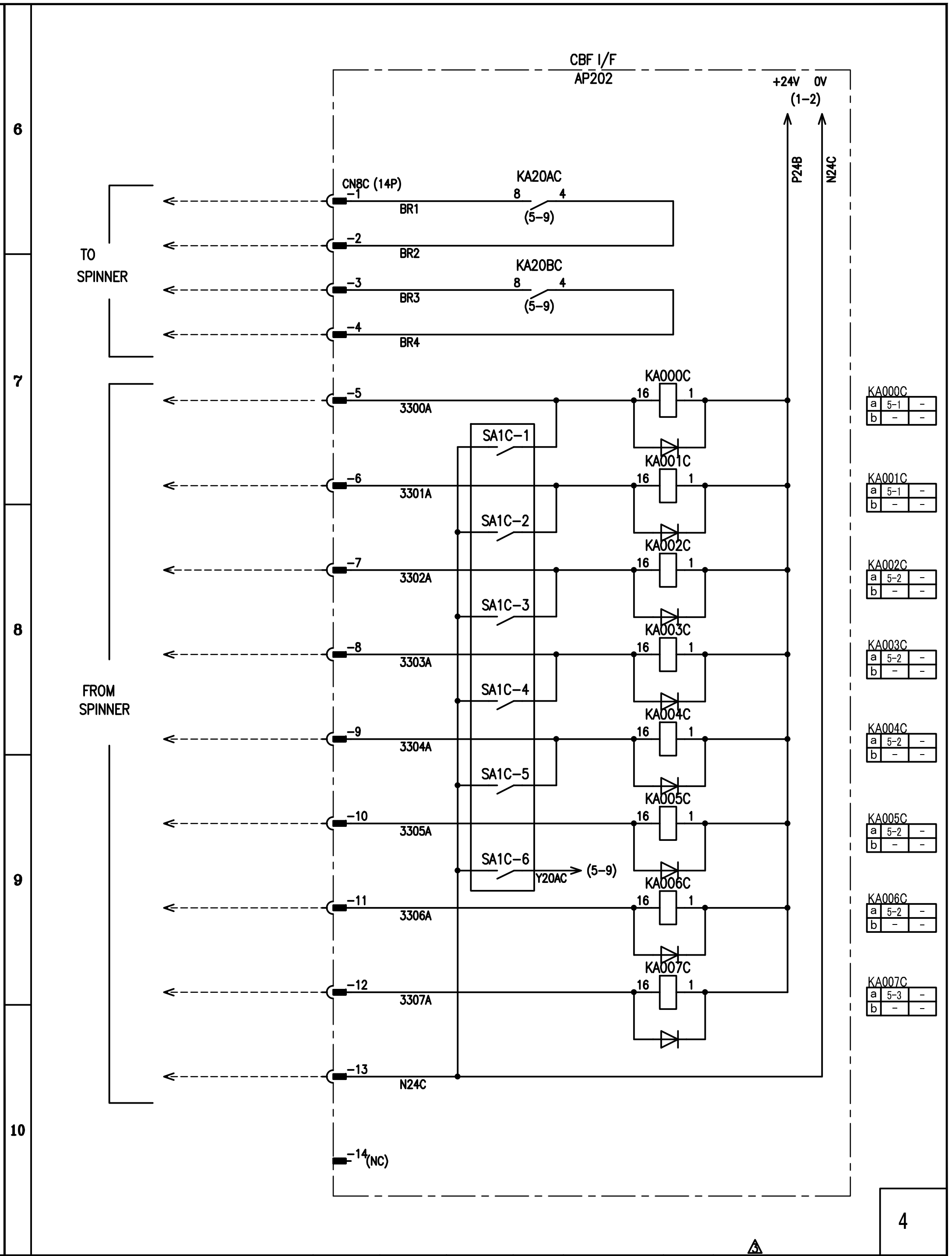

1
2
3
4
5
4
0V
(1-2)
N24C
CN5C
(6P)
-2
EMERGENCY STOP PB
AT OPERATION PANEL
SBC0
SBC0
XF0C
(6-2)
CN5C(6P)
-1
1200A
CN6C
(2P)
-1
SHORT
CBF I/F
AP202
CN6C
-2
1200B
KAESC
EMERGENCY STOP
SIGNAL RELAY
16(-)
1(+)
+24V
(1-2)
P24B
KAESC
a 4-3 4-4
b - -
EMERGENCY STOP RELAY1
KACE1
16(-)
1(+)
KACE1
a 4-3 4-5
b - -
EMERGENCY STOP RELAY2
KACE2
16(-)
1(+)
KACE2
a 4-3 4-5
b - -
CBF MOTIVE POWER
2a
KM201
A2
A1
2b
4KAESC8
(4-1)
4KAPON8
(1-2)
3KACE14
(4-2)
3KACE24
(4-2)
CN3C
-2
1200
KM201
P24B
KM201
a 1-5 1-5 1-5
b - - -
CN3C(2P)
-1
CBF I/F
AP202
FROM
MAIN CONTROL BOX
CN7C(5P)
-1
X0002
9KAESC13
(4-1)
-2
N24A
EMERGENCY STOP SIGNAL
-3
-4
5KACE26
(4-2)
5KACE16
(4-2)
-5 (NC)


6
7
8
9
10
CBF I/F
AP202
+24V 0V
(1-2)
P24B
N24C
CN8C (14P)
-1
BR1
KA20AC
8 4
(5-9)
-2
BR2
TO
SPINNER
-3
BR3
KA20BC
8 4
(5-9)
-4
BR4
-5
3300A
KA000C
16 1
KA000C
a 5-1 -
b - -
SA1C-1
-6
3301A
KA001C
16 1
KA001C
a 5-1 -
b - -
SA1C-2
-7
3302A
KA002C
16 1
KA002C
a 5-2 -
b - -
SA1C-3
-8
3303A
KA003C
16 1
KA003C
a 5-2 -
b - -
FROM
SPINNER
SA1C-4
-9
3304A
KA004C
16 1
KA004C
a 5-2 -
b - -
SA1C-5
-10
3305A
KA005C
16 1
KA005C
a 5-2 -
b - -
SA1C-6
Y20AC
(5-9)
-11
3306A
KA006C
16 1
KA006C
a 5-2 -
b - -
-12
3307A
KA007C
16 1
KA007C
a 5-3 -
b - -
-13
N24C
-14(NC)
4

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 12-07-09 | | 誤記修正 | 50 | 平野 | | ~ | | | | | |
| 2 | a~b | 12-02-21 | | 誤記修正 | 50 | 平野 | | ~ | | | | | |
| 1 | ~ | 11-12-07 | | SA1C-6追加。基板内回路のため図変対応 | 50 | 平野 | 4 | ~ | 20-03-13 | | シンボル置換え | 50 | 福沢 |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CF | 名称<br>NAME | SEQUENCE DIAGRAM<br>(CONTROL CIRCUIT) | |
| 検図<br>CHECKED | 2020-03-13 | H.SHIMO | | | | | |
| 設計<br>DESIGNED | 2011-11-25 | K.HIRANO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CF-QL01B-50 | 004 |
| 製図<br>DRAWN | 2011-11-25 | K.HIRANO | サイズ<br>SIZE | 2 | | | |

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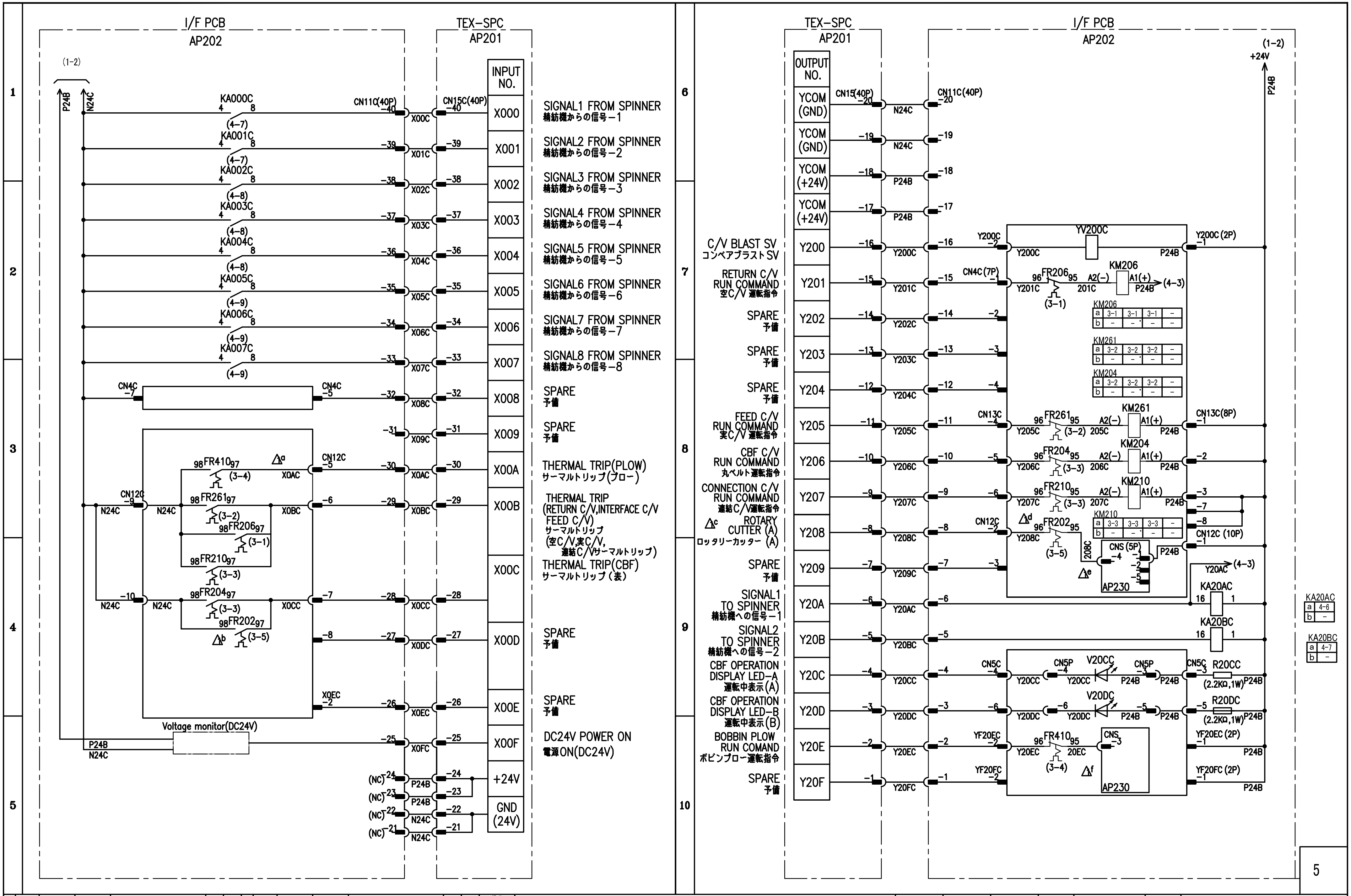
I/F PCB
AP202
TEX-SPC
AP201
INPUT NO.
(1-2)
P24B
N24C
KA000C
KA001C
KA002C
KA003C
KA004C
KA005C
KA006C
KA007C
(4-7)
(4-8)
(4-9)
CN11C(40P)
CN15C(40P)
X00C
X01C
X02C
X03C
X04C
X05C
X06C
X07C
X08C
X09C
X0AC
X0BC
X0CC
X0DC
X0EC
X0FC
X000
X001
X002
X003
X004
X005
X006
X007
X008
X009
X00A
X00B
X00C
X00D
X00E
X00F
+24V
GND (24V)
SIGNAL1 FROM SPINNER
精紡機からの信号－1
SIGNAL2 FROM SPINNER
精紡機からの信号－2
SIGNAL3 FROM SPINNER
精紡機からの信号－3
SIGNAL4 FROM SPINNER
精紡機からの信号－4
SIGNAL5 FROM SPINNER
精紡機からの信号－5
SIGNAL6 FROM SPINNER
精紡機からの信号－6
SIGNAL7 FROM SPINNER
精紡機からの信号－7
SIGNAL8 FROM SPINNER
精紡機からの信号－8
SPARE
予備
THERMAL TRIP(PLOW)
サーマルトリップ(ブロー)
THERMAL TRIP
(RETURN C/V,INTERFACE C/V
FEED C/V)
サーマルトリップ
(空C/V,実C/V,
連結C/Vサーマルトリップ)
THERMAL TRIP(CBF)
サーマルトリップ(表)
DC24V POWER ON
電源ON(DC24V)
CN4C
CN12C
FR410
FR261
FR206
FR210
FR204
FR202
(3-1)
(3-2)
(3-3)
(3-4)
(3-5)
Voltage monitor(DC24V)
(NC)
TEX-SPC
AP201
OUTPUT NO.
I/F PCB
AP202
+24V
YCOM (GND)
YCOM (+24V)
Y200
Y201
Y202
Y203
Y204
Y205
Y206
Y207
Y208
Y209
Y20A
Y20B
Y20C
Y20D
Y20E
Y20F
C/V BLAST SV
コンベアブラストSV
RETURN C/V
RUN COMMAND
空C/V運転指令
FEED C/V
RUN COMMAND
実C/V運転指令
CBF C/V
RUN COMMAND
丸ベルト運転指令
CONNECTION C/V
RUN COMMAND
連結C/V運転指令
ROTARY
CUTTER (A)
ロッタリーカッター (A)
SIGNAL1
TO SPINNER
精紡機への信号－1
SIGNAL2
TO SPINNER
精紡機への信号－2
CBF OPERATION
DISPLAY LED-A
運転中表示(A)
CBF OPERATION
DISPLAY LED-B
運転中表示(B)
BOBBIN PLOW
RUN COMAND
ボビンブロー運転指令
CN15(40P)
CN11C(40P)
YV200C
Y200C (2P)
KM206
KM261
KM204
KM210
A1(+)
A2(-)
(4-3)
CN4C(7P)
CN13C
CN13C(8P)
CN12C (10P)
CNS (5P)
AP230
Y20AC
KA20AC
KA20BC
V20CC
V20DC
CN5P
CN5C
R20CC
(2.2KΩ,1W)
R20DC
YF20EC (2P)
YF20FC (2P)
CNS
FR410
1
2
3
4
5
6
7
8
9
10
5

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| △ | a~f | 19-04-05 |  | ロータリーカッター追加､誤記修正 | 71 | 福沢 |  | ~ |  |  |  |  |  |

備考
APPENDIX

| | | |
|---|---|---|
| CHECKED | 2019-04-05 | H.SHIMO |
| DESIGNED | 2018-10-25 | E.FUKUZAWA |
| DRAWN | 2018-10-25 | M.YOSHIDA |

機種 MACHINE: 9CF
尺度 SCALE:
サイズ SIZE: 2
名称 NAME: SEQUENCE DIAGRAM (I/O CIRCUIT)
図番 DRW.NO: 9CF-QL02B-71 101

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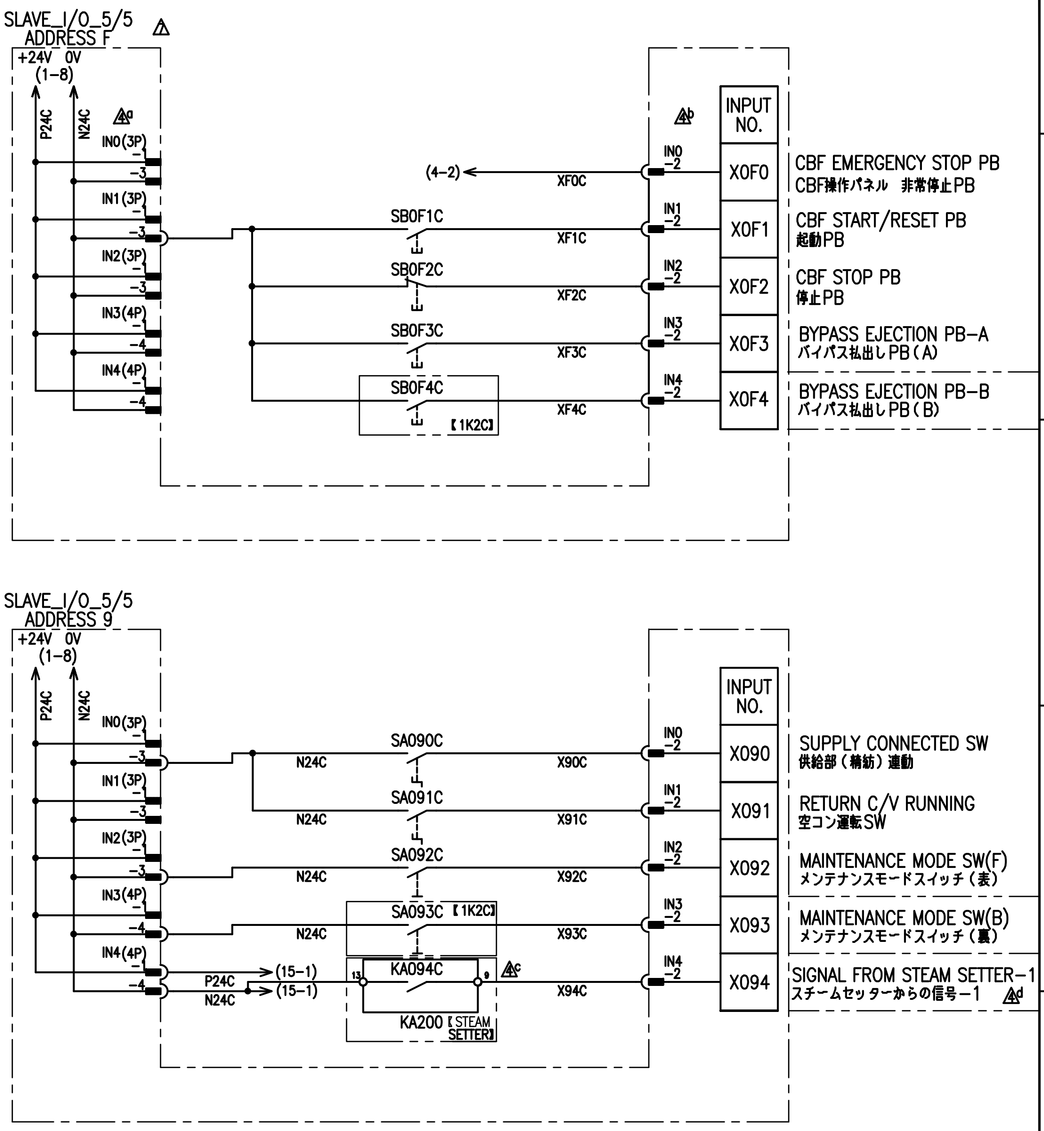
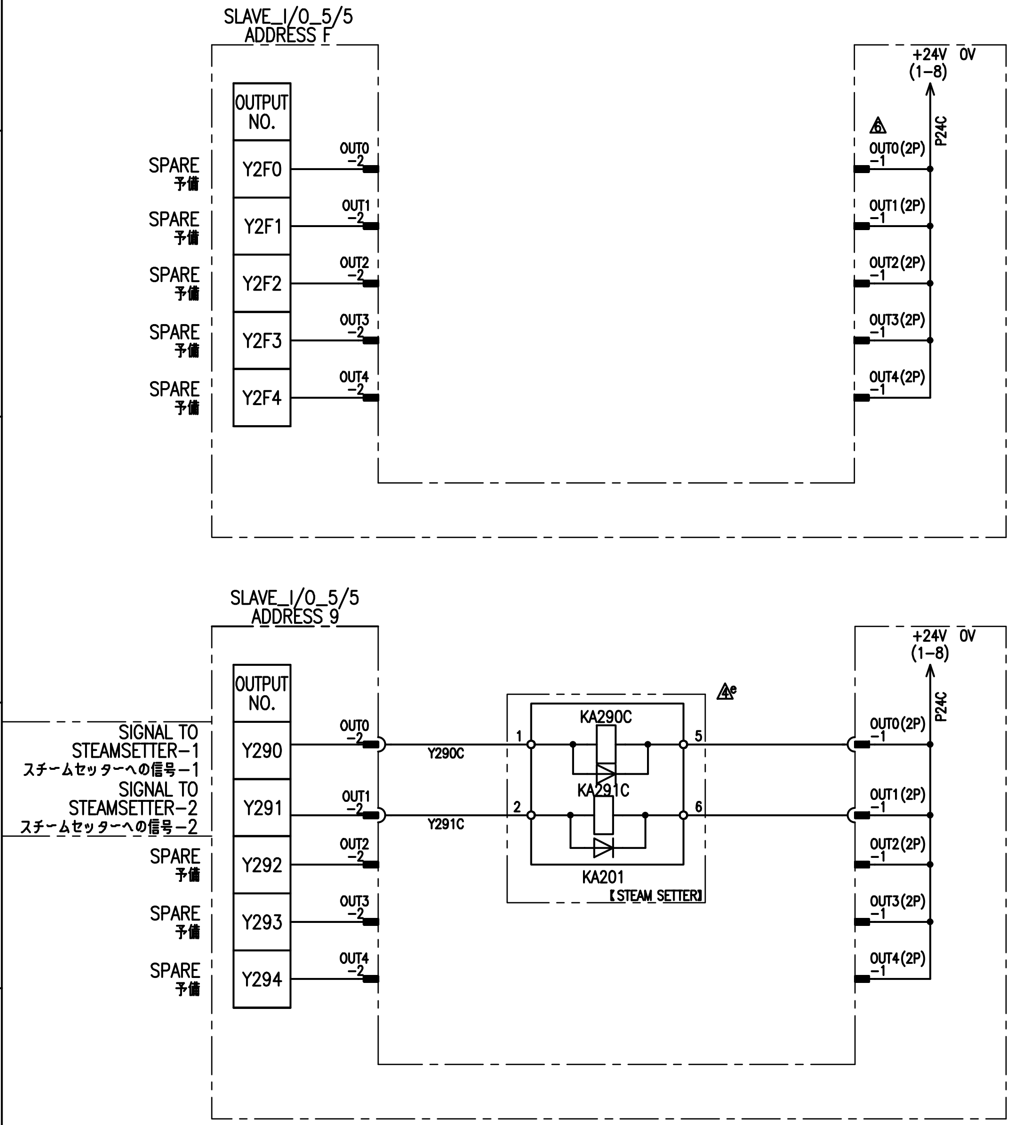

SLAVE_I/O_5/5
ADDRESS F
+24V 0V
(1-8)
P24C
N24C
IN0(3P) -1 -3
IN1(3P) -1 -3
IN2(3P) -1 -3
IN3(4P) -1 -4
IN4(4P) -1 -4
(4-2)
XF0C
SB0F1C
XF1C
SB0F2C
XF2C
SB0F3C
XF3C
SB0F4C
XF4C
【1K2C】
IN0 -2
IN1 -2
IN2 -2
IN3 -2
IN4 -2
INPUT NO.
X0F0
X0F1
X0F2
X0F3
X0F4
CBF EMERGENCY STOP PB
CBF操作パネル 非常停止PB
CBF START/RESET PB
起動PB
CBF STOP PB
停止PB
BYPASS EJECTION PB-A
バイパス払出しPB(A)
BYPASS EJECTION PB-B
バイパス払出しPB(B)
SLAVE_I/O_5/5
ADDRESS 9
+24V 0V
(1-8)
P24C
N24C
IN0(3P) -1 -3
IN1(3P) -1 -3
IN2(3P) -1 -3
IN3(4P) -1 -4
IN4(4P) -1 -4
SA090C
N24C
X90C
SA091C
N24C
X91C
SA092C
N24C
X92C
SA093C 【1K2C】
N24C
X93C
P24C
N24C
(15-1)
(15-1)
KA094C
13
9
KA200【STEAM SETTER】
X94C
IN0 -2
IN1 -2
IN2 -2
IN3 -2
IN4 -2
INPUT NO.
X090
X091
X092
X093
X094
SUPPLY CONNECTED SW
供給部(精紡)連動
RETURN C/V RUNNING
空コン運転SW
MAINTENANCE MODE SW(F)
メンテナンスモードスイッチ(表)
MAINTENANCE MODE SW(B)
メンテナンスモードスイッチ(裏)
SIGNAL FROM STEAM SETTER-1
スチームセッターからの信号-1


SLAVE_I/O_5/5
ADDRESS F
OUTPUT NO.
SPARE
予備
Y2F0
Y2F1
Y2F2
Y2F3
Y2F4
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
+24V 0V
(1-8)
P24C
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
SLAVE_I/O_5/5
ADDRESS 9
OUTPUT NO.
SIGNAL TO STEAMSETTER-1
スチームセッターへの信号-1
SIGNAL TO STEAMSETTER-2
スチームセッターへの信号-2
SPARE
予備
Y290
Y291
Y292
Y293
Y294
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
Y290C
Y291C
KA290C
KA291C
KA201
【STEAM SETTER】
1
2
5
6
+24V 0V
(1-8)
P24C
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | a~e | 14-05-29 | | スチームセッター対応 | 81 | 平野 | | | | | | | |
| 3 | a~e | 12-07-11 | | 誤記修正,線番追記 | 80 | 平野 | 7 | ~ | 20-03-13 | | シンボル置換え | 81 | 福沢 |
| 2 | a~b | 12-02-22 | | オプション枠追記 | 80 | 平野 | 6 | ~ | 16-09-27 | | 誤記修正 | 81 | 福沢 |
| 1 | a~b | 12-01-18 | | 誤記修正 | 80 | 平野 | 5 | ~ | 15-02-23 | | 名称修正 | 81 | 平野 |

備考
APPENDIX

6

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2020-03-13 | H.SHIMO | MACHINE | 9CF | NAME | SEQUENCE DIAGRAM<br>(I/O CIRCUIT OPERATION PANEL) |
| DESIGNED | 2011-11-25 | K.HIRANO | SCALE | | DRW.NO | 9CF-QL01B-81 |
| DRAWN | 2011-11-25 | K.HIRANO | SIZE | 2 | | 107 |

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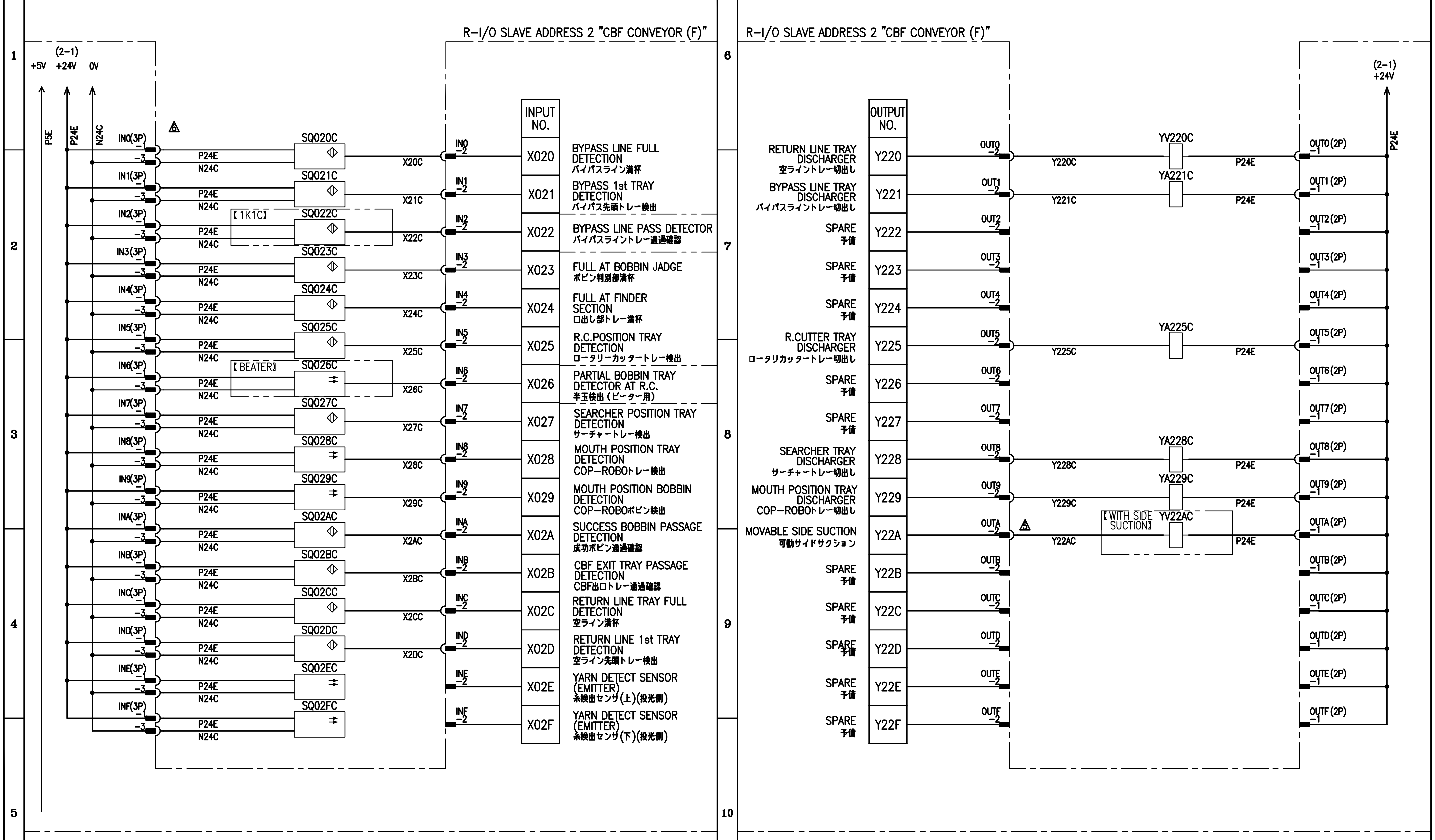
R-I/O SLAVE ADDRESS 2 "CBF CONVEYOR (F)"
R-I/O SLAVE ADDRESS 2 "CBF CONVEYOR (F)"
(2-1)
+5V
+24V
0V
P5E
P24E
N24C
(2-1)
+24V
INPUT NO.
X020 BYPASS LINE FULL DETECTION バイパスライン満杯
X021 BYPASS 1st TRAY DETECTION バイパス先頭トレー検出
X022 BYPASS LINE PASS DETECTOR バイパスライントレー通過確認
X023 FULL AT BOBBIN JADGE ボビン判別部満杯
X024 FULL AT FINDER SECTION 口出し部トレー満杯
X025 R.C.POSITION TRAY DETECTION ロータリーカッタートレー検出
X026 PARTIAL BOBBIN TRAY DETECTOR AT R.C. 半玉検出（ビーター用）
X027 SEARCHER POSITION TRAY DETECTION サーチャートレー検出
X028 MOUTH POSITION TRAY DETECTION COP-ROBOトレー検出
X029 MOUTH POSITION BOBBIN DETECTION COP-ROBOボビン検出
X02A SUCCESS BOBBIN PASSAGE DETECTION 成功ボビン通過確認
X02B CBF EXIT TRAY PASSAGE DETECTION CBF出口トレー通過確認
X02C RETURN LINE TRAY FULL DETECTION 空ライン満杯
X02D RETURN LINE 1st TRAY DETECTION 空ライン先頭トレー検出
X02E YARN DETECT SENSOR (EMITTER) 糸検出センサ(上)(投光側)
X02F YARN DETECT SENSOR (EMITTER) 糸検出センサ(下)(投光側)
SQ020C SQ021C SQ022C SQ023C SQ024C SQ025C SQ026C SQ027C SQ028C SQ029C SQ02AC SQ02BC SQ02CC SQ02DC SQ02EC SQ02FC
【1K1C】
【BEATER】
X20C X21C X22C X23C X24C X25C X26C X27C X28C X29C X2AC X2BC X2CC X2DC
IN0(3P) … INF(3P)
IN0 … INF
-1 -2 -3
OUTPUT NO.
Y220 RETURN LINE TRAY DISCHARGER 空ライントレー切出し
Y221 BYPASS LINE TRAY DISCHARGER バイパスライントレー切出し
Y222 SPARE 予備
Y223 SPARE 予備
Y224 SPARE 予備
Y225 R.CUTTER TRAY DISCHARGER ロータリカッタートレー切出し
Y226 SPARE 予備
Y227 SPARE 予備
Y228 SEARCHER TRAY DISCHARGER サーチャートレー切出し
Y229 MOUTH POSITION TRAY DISCHARGER COP-ROBOトレー切出し
Y22A MOVABLE SIDE SUCTION 可動サイドサクション
Y22B SPARE 予備
Y22C SPARE 予備
Y22D SPARE 予備
Y22E SPARE 予備
Y22F SPARE 予備
YV220C YA221C YA225C YA228C YA229C YV22AC
【WITH SIDE SUCTION】
Y220C Y221C Y225C Y228C Y229C Y22AC
OUT0 … OUTF
OUT0(2P) … OUTF(2P)
1 2 3 4 5
6 7 8 9 10

7

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | 備考 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 14-04-28 | | SQ02EC,SQ02FC追加 | 92 | 平野 | 6 | ~ | 20-03-13 | | シンボル置換え | 93 | 福沢 | APPENDIX |
| 2 | a~e | 12-07-11 | | 誤記修正,線番追記 | 91 | 平野 | 5 | ~ | 16-03-31 | | サイドサクション対応 | 93 | 平野 | |
| 1 | ~ | 12-03-09 | | 仕様追加 | 91 | 平野 | 4 | ~ | 15-02-20 | | 誤記修正 | 92 | 平野 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-03-13 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE2) | |
| 設計 DESIGNED | 2011-11-25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-93 | 306 |
| 製図 DRAWN | 2011-11-25 | K.HIRANO | サイズ SIZE | 2 | | | |

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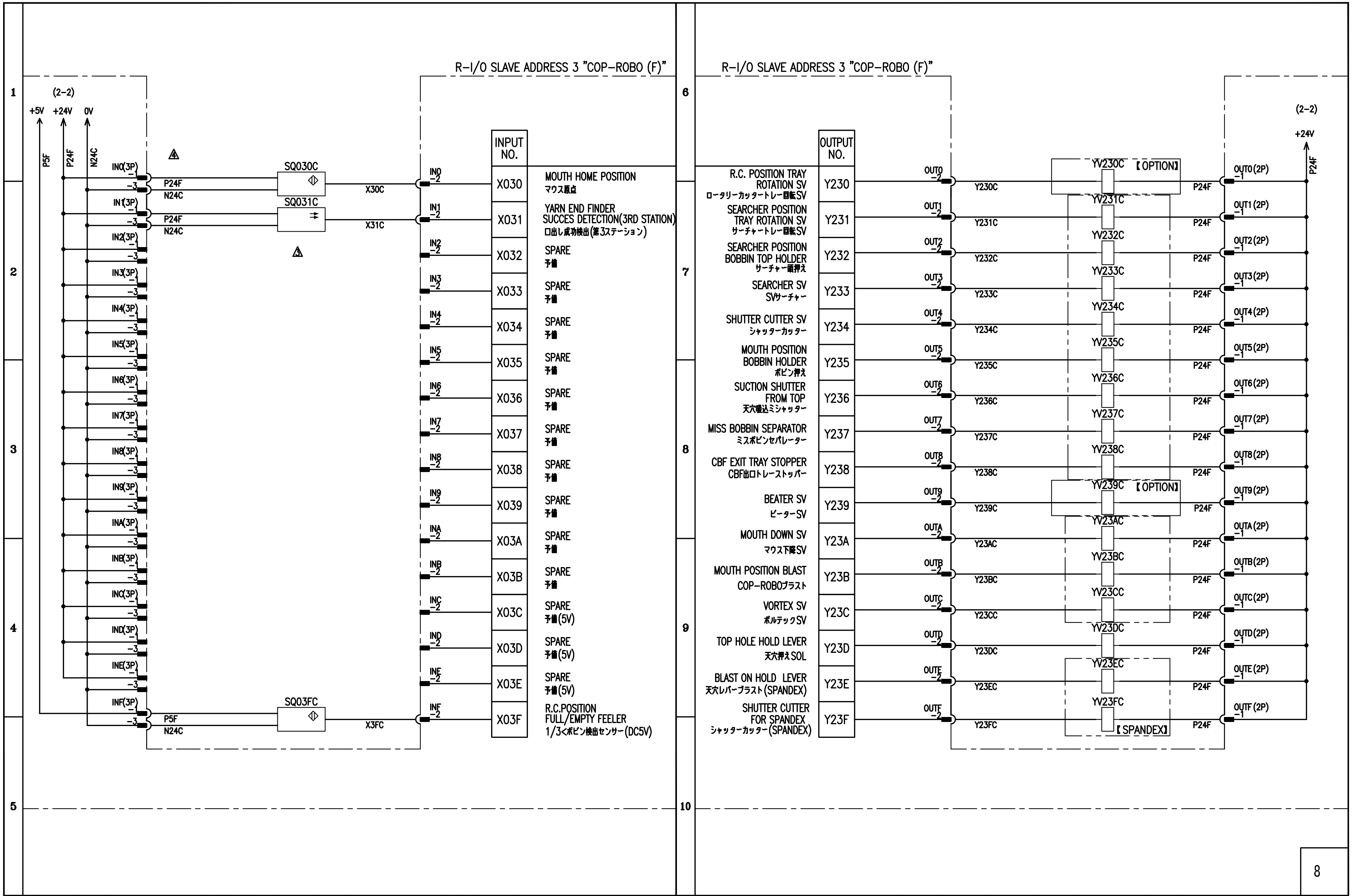
R-I/O SLAVE ADDRESS 3 "COP-ROBO (F)"
R-I/O SLAVE ADDRESS 3 "COP-ROBO (F)"
(2-2)
+5V
+24V
0V
P5F
P24F
N24C
IN0(3P) -1 -3
IN1(3P) -1 -3
IN2(3P) -1 -3
IN3(3P) -1 -3
IN4(3P) -1 -3
IN5(3P) -1 -3
IN6(3P) -1 -3
IN7(3P) -1 -3
IN8(3P) -1 -3
IN9(3P) -1 -3
INA(3P) -1 -3
INB(3P) -1 -3
INC(3P) -1 -3
IND(3P) -1 -3
INE(3P) -1 -3
INF(3P) -1 -3
SQ030C
SQ031C
SQ03FC
P24F
N24C
P5F
X30C
X31C
X3FC
IN0 -2
IN1 -2
IN2 -2
IN3 -2
IN4 -2
IN5 -2
IN6 -2
IN7 -2
IN8 -2
IN9 -2
INA -2
INB -2
INC -2
IND -2
INE -2
INF -2
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
OUT5 -2
OUT6 -2
OUT7 -2
OUT8 -2
OUT9 -2
OUTA -2
OUTB -2
OUTC -2
OUTD -2
OUTE -2
OUTF -2
Y230C
Y231C
Y232C
Y233C
Y234C
Y235C
Y236C
Y237C
Y238C
Y239C
Y23AC
Y23BC
Y23CC
Y23DC
Y23EC
Y23FC
YV230C 【OPTION】
YV231C
YV232C
YV233C
YV234C
YV235C
YV236C
YV237C
YV238C
YV239C 【OPTION】
YV23AC
YV23BC
YV23CC
YV23DC
YV23EC
YV23FC
【SPANDEX】
P24F
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
OUT5(2P) -1
OUT6(2P) -1
OUT7(2P) -1
OUT8(2P) -1
OUT9(2P) -1
OUTA(2P) -1
OUTB(2P) -1
OUTC(2P) -1
OUTD(2P) -1
OUTE(2P) -1
OUTF(2P) -1
(2-2)
+24V
P24F
1
2
3
4
5
6
7
8
9
10

| INPUT NO. | |
|---|---|
| X030 | MOUTH HOME POSITION<br>マウス原点 |
| X031 | YARN END FINDER<br>SUCCES DETECTION(3RD STATION)<br>口出し成功検出(第3ステーション) |
| X032 | SPARE<br>予備 |
| X033 | SPARE<br>予備 |
| X034 | SPARE<br>予備 |
| X035 | SPARE<br>予備 |
| X036 | SPARE<br>予備 |
| X037 | SPARE<br>予備 |
| X038 | SPARE<br>予備 |
| X039 | SPARE<br>予備 |
| X03A | SPARE<br>予備 |
| X03B | SPARE<br>予備 |
| X03C | SPARE<br>予備(5V) |
| X03D | SPARE<br>予備(5V) |
| X03E | SPARE<br>予備(5V) |
| X03F | R.C.POSITION<br>FULL/EMPTY FEELER<br>1/3<ボビン検出センサー(DC5V) |

| | OUTPUT NO. |
|---|---|
| R.C. POSITION TRAY ROTATION SV<br>ロータリーカッタートレー回転SV | Y230 |
| SEARCHER POSITION TRAY ROTATION SV<br>サーチャートレー回転SV | Y231 |
| SEARCHER POSITION BOBBIN TOP HOLDER<br>サーチャー頭押え | Y232 |
| SEARCHER SV<br>SVサーチャー | Y233 |
| SHUTTER CUTTER SV<br>シャッターカッター | Y234 |
| MOUTH POSITION BOBBIN HOLDER<br>ボビン押え | Y235 |
| SUCTION SHUTTER FROM TOP<br>天穴吸込ミシャッター | Y236 |
| MISS BOBBIN SEPARATOR<br>ミスボビンセパレーター | Y237 |
| CBF EXIT TRAY STOPPER<br>CBF出口トレーストッパー | Y238 |
| BEATER SV<br>ビーターSV | Y239 |
| MOUTH DOWN SV<br>マウス下降SV | Y23A |
| MOUTH POSITION BLAST<br>COP-ROBOブラスト | Y23B |
| VORTEX SV<br>ボルテックSV | Y23C |
| TOP HOLE HOLD LEVER<br>天穴押えSOL | Y23D |
| BLAST ON HOLD LEVER<br>天穴レバーブラスト(SPANDEX) | Y23E |
| SHUTTER CUTTER FOR SPANDEX<br>シャッターカッター(SPANDEX) | Y23F |

8

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ～ | 17-06-06 | | 糸端検出(第2ステーション)削除 | A2 | 福沢 | | ～ | | | | | |
| 2 | a～c | 16-03-31 | | サイドサクション対応,誤記訂正 | A1 | 平野 | | ～ | | | | | |
| 1 | a～e | 12-07-09 | | 誤記修正,線番追記 | A0 | 平野 | 4 | ～ | 20-03-13 | | シンボル置換え | A2 | 福沢 |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-03-13 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM<br>(I/O CIRCUIT SLAVE3) |
| 設計 DESIGNED | 2011-11-25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-A2 / 204 |
| 製図 DRAWN | 2011-11-25 | K.HIRANO | サイズ SIZE | 2 | | |

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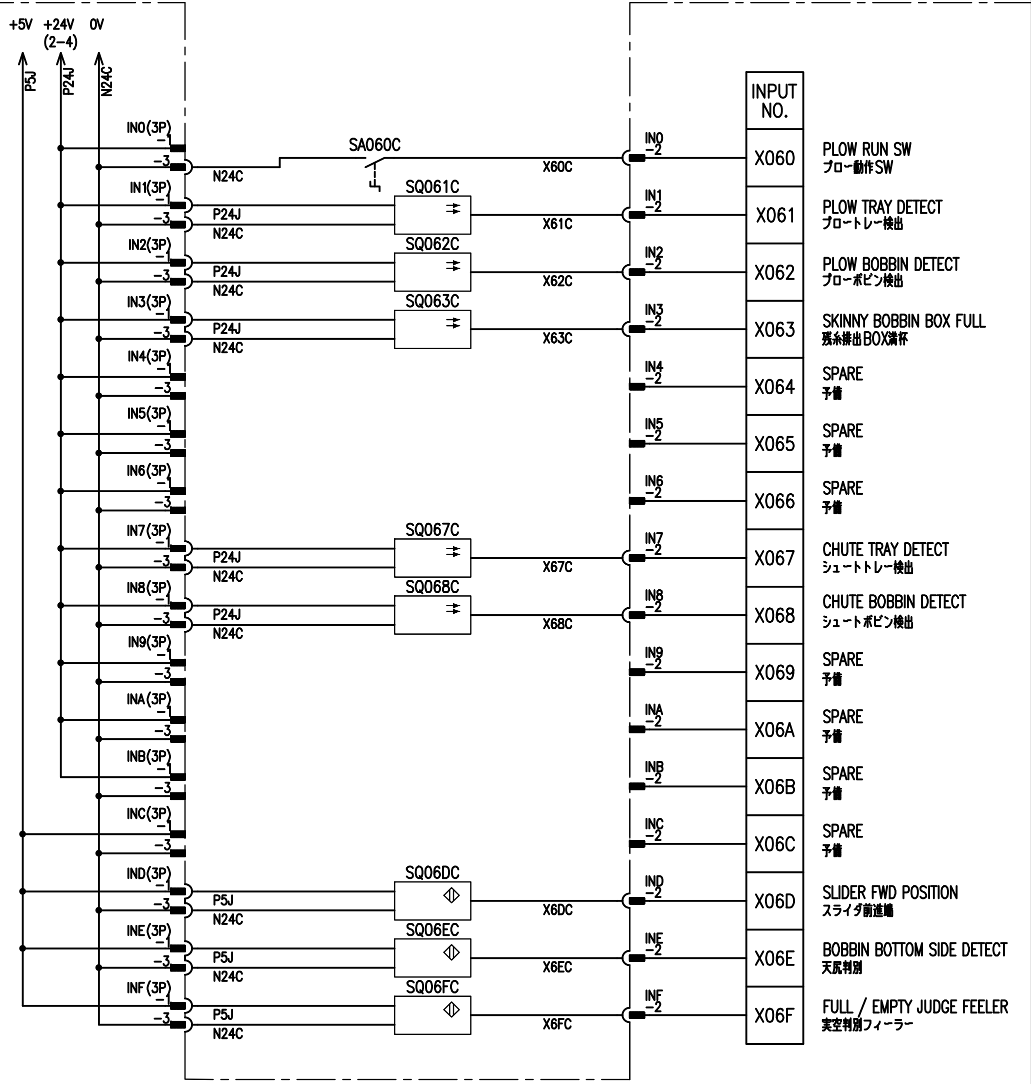
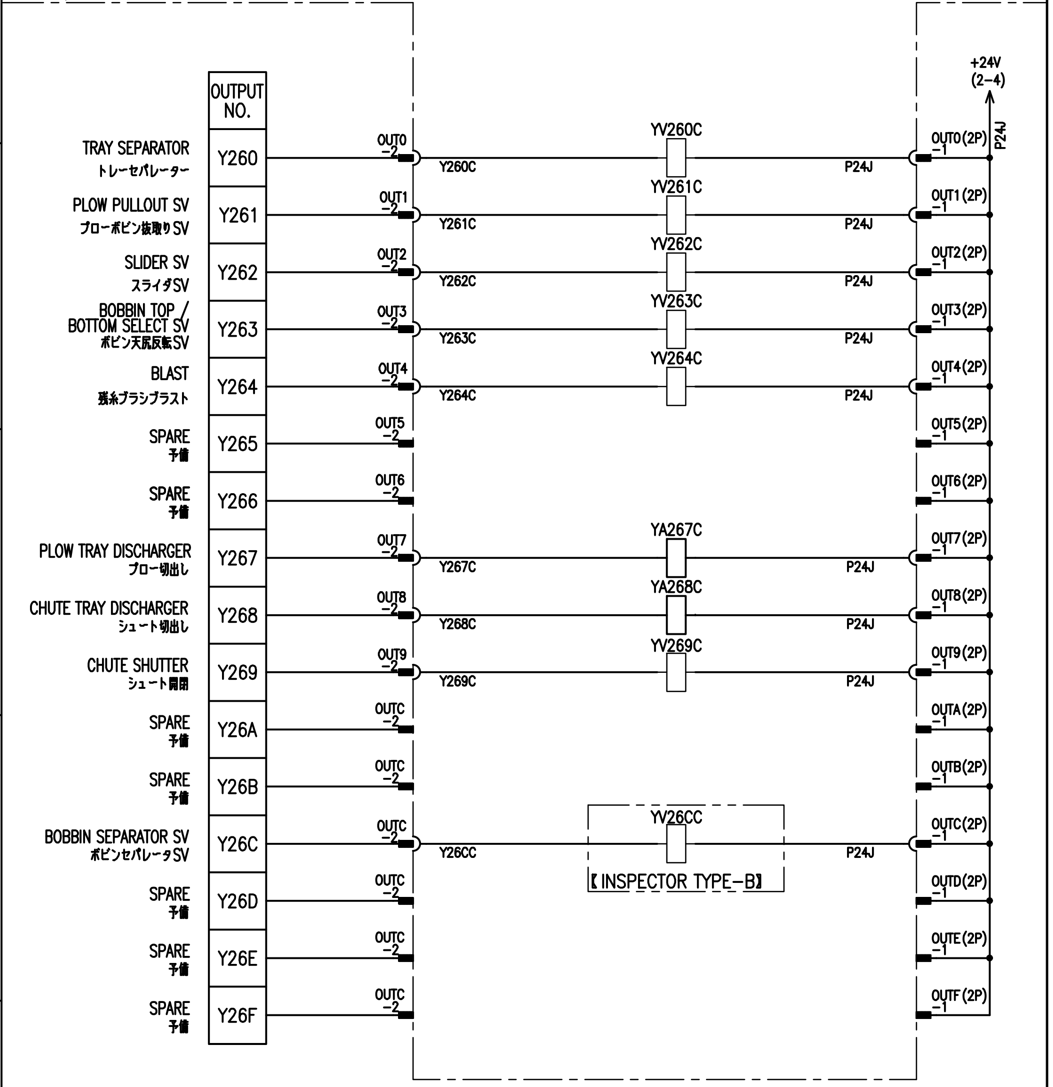
⚠

R–I/O SLAVE ADDRESS 6 "BOBBIN EXCHANGER"


+5V
+24V (2–4)
0V
P5J
P24J
N24C
IN0(3P) –1 –3
IN1(3P) –1 –3
IN2(3P) –1 –3
IN3(3P) –1 –3
IN4(3P) –1 –3
IN5(3P) –1 –3
IN6(3P) –1 –3
IN7(3P) –1 –3
IN8(3P) –1 –3
IN9(3P) –1 –3
INA(3P) –1 –3
INB(3P) –1 –3
INC(3P) –1 –3
IND(3P) –1 –3
INE(3P) –1 –3
INF(3P) –1 –3
SA060C
SQ061C
SQ062C
SQ063C
SQ067C
SQ068C
SQ06DC
SQ06EC
SQ06FC
X60C
X61C
X62C
X63C
X67C
X68C
X6DC
X6EC
X6FC
IN0 –2
IN1 –2
IN2 –2
IN3 –2
IN4 –2
IN5 –2
IN6 –2
IN7 –2
IN8 –2
IN9 –2
INA –2
INB –2
INC –2
IND –2
INE –2
INF –2
INPUT NO.
X060 PLOW RUN SW プロー動作SW
X061 PLOW TRAY DETECT プロートレー検出
X062 PLOW BOBBIN DETECT プローボビン検出
X063 SKINNY BOBBIN BOX FULL 残糸排出BOX満杯
X064 SPARE 予備
X065 SPARE 予備
X066 SPARE 予備
X067 CHUTE TRAY DETECT シュートトレー検出
X068 CHUTE BOBBIN DETECT シュートボビン検出
X069 SPARE 予備
X06A SPARE 予備
X06B SPARE 予備
X06C SPARE 予備
X06D SLIDER FWD POSITION スライダ前進端
X06E BOBBIN BOTTOM SIDE DETECT 天尻判別
X06F FULL / EMPTY JUDGE FEELER 実空判別フィーラー

R–I/O SLAVE ADDRESS 6 "BOBBIN EXCHANGER"


OUTPUT NO.
TRAY SEPARATOR トレーセパレーター Y260
PLOW PULLOUT SV プローボビン抜取りSV Y261
SLIDER SV スライダSV Y262
BOBBIN TOP / BOTTOM SELECT SV ボビン天尻反転SV Y263
BLAST 残糸ブラシブラスト Y264
SPARE 予備 Y265
SPARE 予備 Y266
PLOW TRAY DISCHARGER プロー切出し Y267
CHUTE TRAY DISCHARGER シュート切出し Y268
CHUTE SHUTTER シュート開閉 Y269
SPARE 予備 Y26A
SPARE 予備 Y26B
BOBBIN SEPARATOR SV ボビンセパレータSV Y26C
SPARE 予備 Y26D
SPARE 予備 Y26E
SPARE 予備 Y26F
OUT0 –2
OUT1 –2
OUT2 –2
OUT3 –2
OUT4 –2
OUT5 –2
OUT6 –2
OUT7 –2
OUT8 –2
OUT9 –2
OUTC –2
Y260C
Y261C
Y262C
Y263C
Y264C
Y267C
Y268C
Y269C
Y26CC
YV260C
YV261C
YV262C
YV263C
YV264C
YA267C
YA268C
YV269C
YV26CC
【INSPECTOR TYPE–B】
P24J
+24V (2–4)
OUT0(2P) –1
OUT1(2P) –1
OUT2(2P) –1
OUT3(2P) –1
OUT4(2P) –1
OUT5(2P) –1
OUT6(2P) –1
OUT7(2P) –1
OUT8(2P) –1
OUT9(2P) –1
OUTA(2P) –1
OUTB(2P) –1
OUTC(2P) –1
OUTD(2P) –1
OUTE(2P) –1
OUTF(2P) –1

11

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| ⚠ | ~ | 20-03-18 |  | 図枠訂正 | DO | 福? |  | ~ |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020 – 03 – 18 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM (SLAVE 6) |
| 設計 DESIGNED | 2018 – 10 – 05 | E.FUKUZAWA | 尺度 SCALE |  | 図番 DRW.NO | 9CF–QL02B–D0 |
| 製図 DRAWN | 2018 – 10 – 05 | M.YOSHIDA | サイズ SIZE | 2 |  | 001 |

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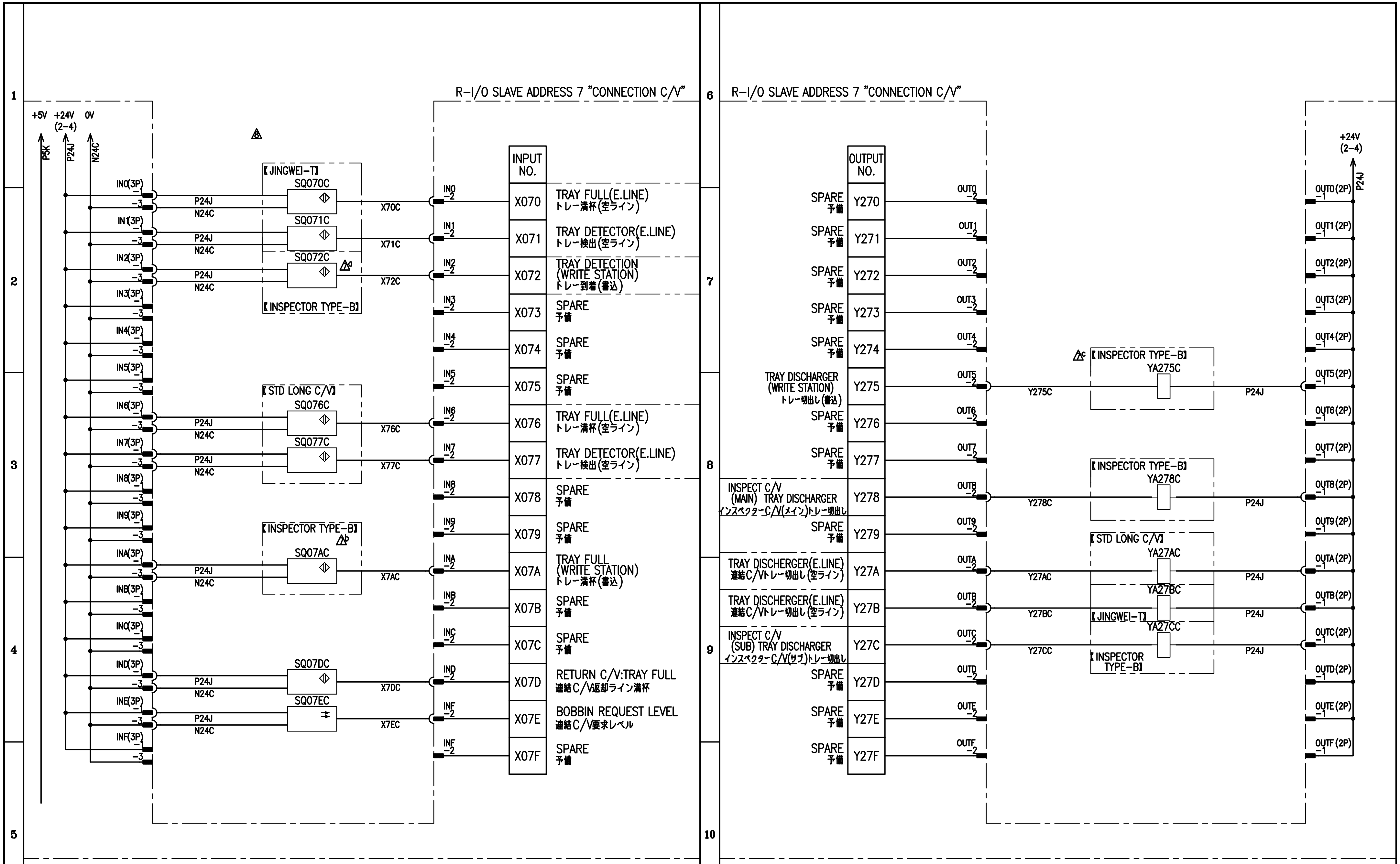
1
2
3
4
5
6
7
8
9
10
R-I/O SLAVE ADDRESS 7 "CONNECTION C/V"
+5V
+24V (2-4)
0V
P5K
P24J
N24C
8
IN0(3P) -1 -3
IN1(3P) -1 -3
IN2(3P) -1 -3
IN3(3P) -1 -3
IN4(3P) -1 -3
IN5(3P) -1 -3
IN6(3P) -1 -3
IN7(3P) -1 -3
IN8(3P) -1 -3
IN9(3P) -1 -3
INA(3P) -1 -3
INB(3P) -1 -3
INC(3P) -1 -3
IND(3P) -1 -3
INE(3P) -1 -3
INF(3P) -1 -3
P24J
N24C
【JINGWEI-T】
SQ070C
SQ071C
SQ072C
2a
【INSPECTOR TYPE-B】
【STD LONG C/V】
SQ076C
SQ077C
【INSPECTOR TYPE-B】
2b
SQ07AC
SQ07DC
SQ07EC
X70C
X71C
X72C
X76C
X77C
X7AC
X7DC
X7EC
IN0 -2
IN1 -2
IN2 -2
IN3 -2
IN4 -2
IN5 -2
IN6 -2
IN7 -2
IN8 -2
IN9 -2
INA -2
INB -2
INC -2
IND -2
INE -2
INF -2
INPUT NO.
X070 TRAY FULL(E.LINE) トレー満杯(空ライン)
X071 TRAY DETECTOR(E.LINE) トレー検出(空ライン)
X072 TRAY DETECTION (WRITE STATION) トレー到着(書込)
X073 SPARE 予備
X074 SPARE 予備
X075 SPARE 予備
X076 TRAY FULL(E.LINE) トレー満杯(空ライン)
X077 TRAY DETECTOR(E.LINE) トレー検出(空ライン)
X078 SPARE 予備
X079 SPARE 予備
X07A TRAY FULL (WRITE STATION) トレー満杯(書込)
X07B SPARE 予備
X07C SPARE 予備
X07D RETURN C/V:TRAY FULL 連結C/V返却ライン満杯
X07E BOBBIN REQUEST LEVEL 連結C/V要求レベル
X07F SPARE 予備
R-I/O SLAVE ADDRESS 7 "CONNECTION C/V"
OUTPUT NO.
SPARE 予備 Y270
SPARE 予備 Y271
SPARE 予備 Y272
SPARE 予備 Y273
SPARE 予備 Y274
TRAY DISCHARGER (WRITE STATION) トレー切出し(書込) Y275
SPARE 予備 Y276
SPARE 予備 Y277
INSPECT C/V (MAIN) TRAY DISCHARGER インスペクターC/V(メイン)トレー切出し Y278
SPARE 予備 Y279
TRAY DISCHERGER(E.LINE) 連結C/Vトレー切出し(空ライン) Y27A
TRAY DISCHERGER(E.LINE) 連結C/Vトレー切出し(空ライン) Y27B
INSPECT C/V (SUB) TRAY DISCHARGER インスペクターC/V(サブ)トレー切出し Y27C
SPARE 予備 Y27D
SPARE 予備 Y27E
SPARE 予備 Y27F
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
OUT5 -2
OUT6 -2
OUT7 -2
OUT8 -2
OUT9 -2
OUTA -2
OUTB -2
OUTC -2
OUTD -2
OUTE -2
OUTF -2
2c
【INSPECTOR TYPE-B】
YA275C
Y275C
【INSPECTOR TYPE-B】
YA278C
Y278C
【STD LONG C/V】
YA27AC
Y27AC
YA27BC
Y27BC
【JINGWEI-T】
YA27CC
Y27CC
【INSPECTOR TYPE-B】
P24J
+24V (2-4)
P24J
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
OUT5(2P) -1
OUT6(2P) -1
OUT7(2P) -1
OUT8(2P) -1
OUT9(2P) -1
OUTA(2P) -1
OUTB(2P) -1
OUTC(2P) -1
OUTD(2P) -1
OUTE(2P) -1
OUTF(2P) -1

12

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | a~c | 14-09-30 | | 地上ロング対応,名称修正 | E2 | 平野 | 8 | | 20-03-24 | | シンボル置換え | E4 | 福沢 |
| 3 | ~ | 13-09-24 | | 誤記修正 | E1 | 宮脇 | 7 | a~c | 18-10-10 | | INSPECTOR書込み停止対応 | E4 | 福沢 |
| 2 | a~f | 12-11-29 | | INSPECTOR TYPE-B追加 | E1 | 宮脇 | 6 | a~d | 17-12-14 | | JINGWEI-T仕様追加,シンボル置換え | E3 | 福沢 |
| 1 | a~c | 12-07-10 | | 誤記修正,線番追記 | E0 | 平野 | 5 | ~ | 14-12-19 | | 誤記修正 | E2 | 平野 |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |

備考 APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM (I/O CIRCUIT SLAVE7) | |
| 検図 CHECKED | 2020-03-24 | H.SHIMO | | | | | |
| 設計 DESIGNED | 2011-11-25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-E4 | 408 |
| 製図 DRAWN | 2011-11-25 | K.HIRANO | サイズ SIZE | 2 | | | |

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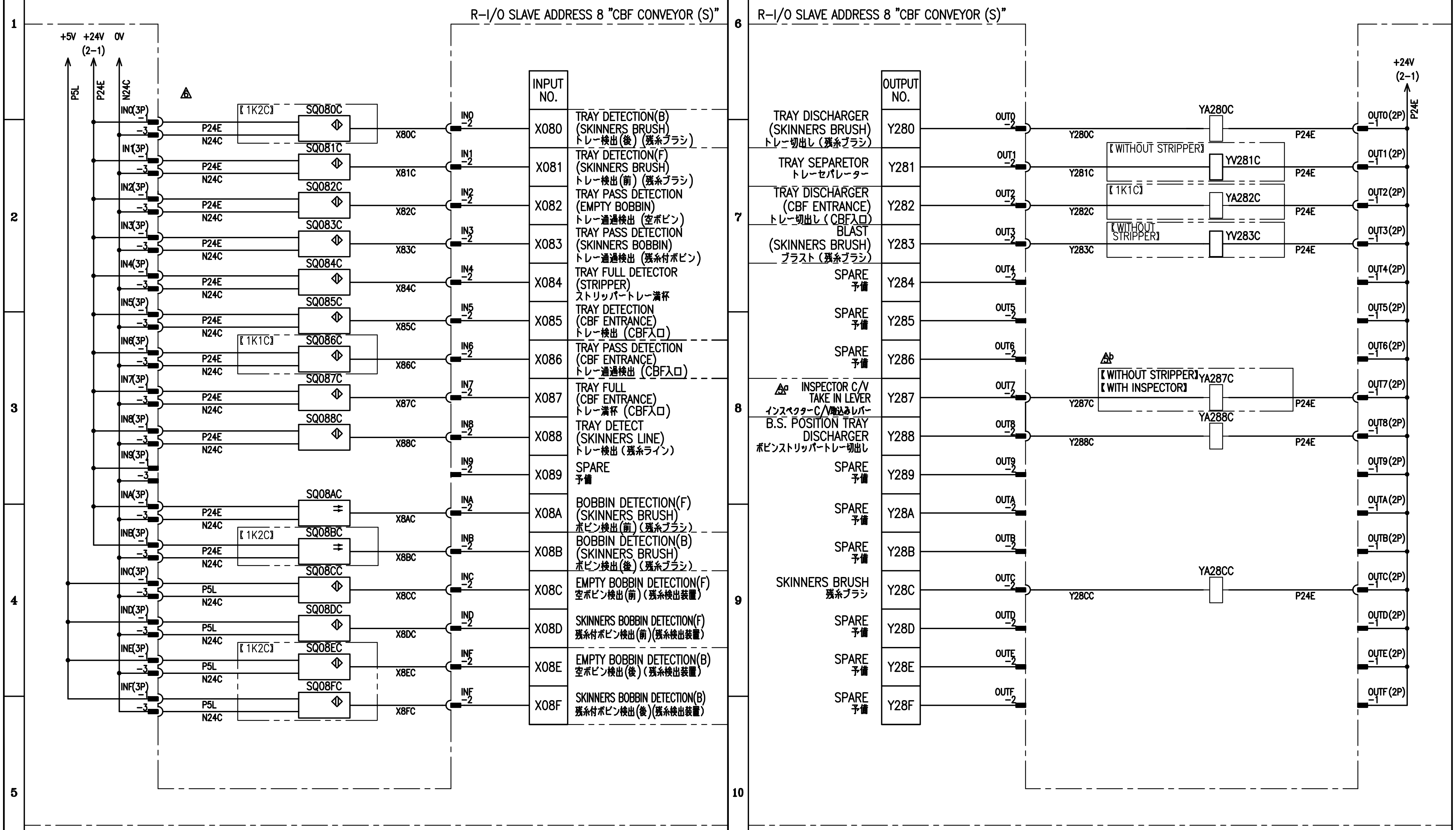
1
2
3
4
5
6
7
8
9
10
R-I/O SLAVE ADDRESS 8 "CBF CONVEYOR (S)"
R-I/O SLAVE ADDRESS 8 "CBF CONVEYOR (S)"
+5V
+24V
(2-1)
0V
P5L
P24E
N24C
IN0(3P) -1 -3
IN1(3P) -1 -3
IN2(3P) -1 -3
IN3(3P) -1 -3
IN4(3P) -1 -3
IN5(3P) -1 -3
IN6(3P) -1 -3
IN7(3P) -1 -3
IN8(3P) -1 -3
IN9(3P) -1 -3
INA(3P) -1 -3
INB(3P) -1 -3
INC(3P) -1 -3
IND(3P) -1 -3
INE(3P) -1 -3
INF(3P) -1 -3
【1K2C】
【1K1C】
【1K2C】
【1K2C】
SQ080C
SQ081C
SQ082C
SQ083C
SQ084C
SQ085C
SQ086C
SQ087C
SQ088C
SQ08AC
SQ08BC
SQ08CC
SQ08DC
SQ08EC
SQ08FC
X80C
X81C
X82C
X83C
X84C
X85C
X86C
X87C
X88C
X8AC
X8BC
X8CC
X8DC
X8EC
X8FC
IN0 -2
IN1 -2
IN2 -2
IN3 -2
IN4 -2
IN5 -2
IN6 -2
IN7 -2
IN8 -2
IN9 -2
INA -2
INB -2
INC -2
IND -2
INE -2
INF -2
OUT0 -2
OUT1 -2
OUT2 -2
OUT3 -2
OUT4 -2
OUT5 -2
OUT6 -2
OUT7 -2
OUT8 -2
OUT9 -2
OUTA -2
OUTB -2
OUTC -2
OUTD -2
OUTE -2
OUTF -2
Y280C
Y281C
Y282C
Y283C
Y287C
Y288C
Y28CC
YA280C
YV281C
YA282C
YV283C
YA287C
YA288C
YA28CC
【WITHOUT STRIPPER】
【1K1C】
【WITHOUT STRIPPER】
【WITHOUT STRIPPER】
【WITH INSPECTOR】
5b
5
+24V
(2-1)
P24E
OUT0(2P) -1
OUT1(2P) -1
OUT2(2P) -1
OUT3(2P) -1
OUT4(2P) -1
OUT5(2P) -1
OUT6(2P) -1
OUT7(2P) -1
OUT8(2P) -1
OUT9(2P) -1
OUTA(2P) -1
OUTB(2P) -1
OUTC(2P) -1
OUTD(2P) -1
OUTE(2P) -1
OUTF(2P) -1

| INPUT NO. | |
|---|---|
| X080 | TRAY DETECTION(B)<br>(SKINNERS BRUSH)<br>トレー検出(後)(残糸ブラシ) |
| X081 | TRAY DETECTION(F)<br>(SKINNERS BRUSH)<br>トレー検出(前)(残糸ブラシ) |
| X082 | TRAY PASS DETECTION<br>(EMPTY BOBBIN)<br>トレー通過検出 (空ボビン) |
| X083 | TRAY PASS DETECTION<br>(SKINNERS BOBBIN)<br>トレー通過検出 (残糸付ボビン) |
| X084 | TRAY FULL DETECTOR<br>(STRIPPER)<br>ストリッパートレー満杯 |
| X085 | TRAY DETECTION<br>(CBF ENTRANCE)<br>トレー検出 (CBF入口) |
| X086 | TRAY PASS DETECTION<br>(CBF ENTRANCE)<br>トレー通過検出 (CBF入口) |
| X087 | TRAY FULL<br>(CBF ENTRANCE)<br>トレー満杯 (CBF入口) |
| X088 | TRAY DETECT<br>(SKINNERS LINE)<br>トレー検出(残糸ライン) |
| X089 | SPARE<br>予備 |
| X08A | BOBBIN DETECTION(F)<br>(SKINNERS BRUSH)<br>ボビン検出(前)(残糸ブラシ) |
| X08B | BOBBIN DETECTION(B)<br>(SKINNERS BRUSH)<br>ボビン検出(後)(残糸ブラシ) |
| X08C | EMPTY BOBBIN DETECTION(F)<br>空ボビン検出(前)(残糸検出装置) |
| X08D | SKINNERS BOBBIN DETECTION(F)<br>残糸付ボビン検出(前)(残糸検出装置) |
| X08E | EMPTY BOBBIN DETECTION(B)<br>空ボビン検出(後)(残糸検出装置) |
| X08F | SKINNERS BOBBIN DETECTION(B)<br>残糸付ボビン検出(後)(残糸検出装置) |

| | OUTPUT NO. |
|---|---|
| TRAY DISCHARGER<br>(SKINNERS BRUSH)<br>トレー切出し(残糸ブラシ) | Y280 |
| TRAY SEPARETOR<br>トレーセパレーター | Y281 |
| TRAY DISCHARGER<br>(CBF ENTRANCE)<br>トレー切出し(CBF入口) | Y282 |
| BLAST<br>(SKINNERS BRUSH)<br>ブラスト(残糸ブラシ) | Y283 |
| SPARE<br>予備 | Y284 |
| SPARE<br>予備 | Y285 |
| SPARE<br>予備 | Y286 |
| 5a INSPECTOR C/V<br>TAKE IN LEVER<br>インスペクターC/V取込みレバー | Y287 |
| B.S. POSITION TRAY<br>DISCHARGER<br>ボビンストリッパートレー切出し | Y288 |
| SPARE<br>予備 | Y289 |
| SPARE<br>予備 | Y28A |
| SPARE<br>予備 | Y28B |
| SKINNERS BRUSH<br>残糸ブラシ | Y28C |
| SPARE<br>予備 | Y28D |
| SPARE<br>予備 | Y28E |
| SPARE<br>予備 | Y28F |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 12-05-25 | | 誤記訂正 | F2 | 平野 | 6 | ~ | 20-03-13 | | シンボル置換え | F4 | 福沢 |
| 2 | a~c | 12-03-09 | | 仕様分け追加,誤記訂正 | F2 | 平野 | 5 | a~b | 14-04-01 | | ストリッパー準備型+インスペクター対応 | F4 | 宮脇 |
| 1 | a~c | 12-02-22 | | 2COP-ROBO対応 | F1 | 平野 | 4 | a~f | 12-11-30 | | ストリッパー準備型対応 | F3 | 平野 |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-03-13 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM<br>(I/O CIRCUIT SLAVE8) | |
| 設計 DESIGNED | 2011-11-25 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-F4 | 406 |
| 製図 DRAWN | 2011-11-25 | K.HIRANO | サイズ SIZE | 2 | | | |

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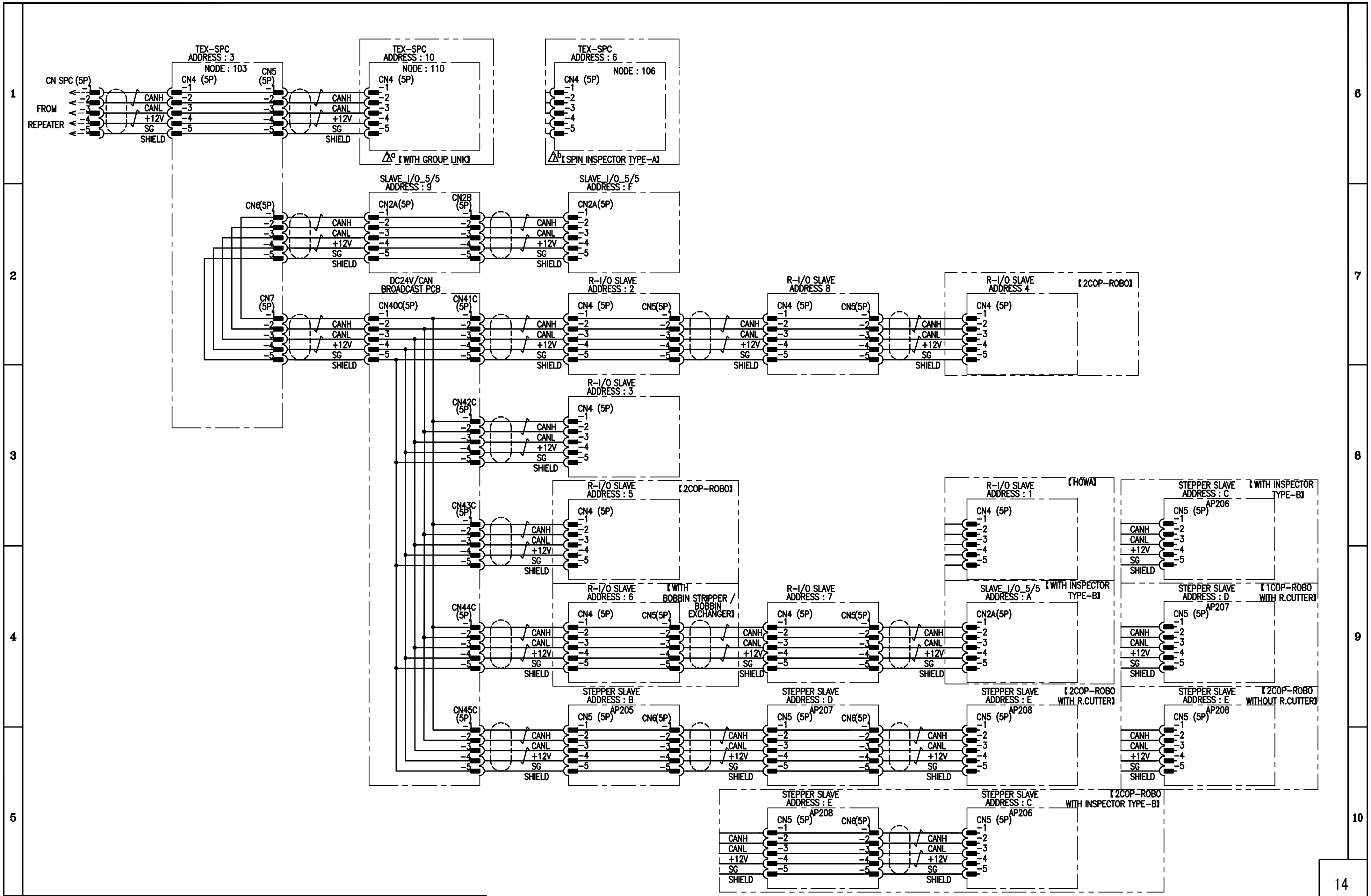

1
2
3
4
5
6
7
8
9
10
CN SPC (5P)
FROM
REPEATER
TEX-SPC
ADDRESS : 3
NODE : 103
CN4 (5P)
CN5 (5P)
CN6(5P)
CN7 (5P)
CANH
CANL
+12V
SG
SHIELD
TEX-SPC
ADDRESS : 10
NODE : 110
CN4 (5P)
a【WITH GROUP LINK】
TEX-SPC
ADDRESS : 6
NODE : 106
CN4 (5P)
b【SPIN INSPECTOR TYPE-A】
SLAVE_I/O_5/5
ADDRESS : 9
CN2A(5P)
CN2B (5P)
SLAVE_I/O_5/5
ADDRESS : F
CN2A(5P)
DC24V/CAN
BROADCAST PCB
CN40C(5P)
CN41C (5P)
CN42C (5P)
CN43C (5P)
CN44C (5P)
CN45C (5P)
R-I/O SLAVE
ADDRESS : 2
CN4 (5P)
CN5(5P)
R-I/O SLAVE
ADDRESS 8
CN4 (5P)
CN5(5P)
R-I/O SLAVE
ADDRESS 4
【2COP-ROBO】
CN4 (5P)
R-I/O SLAVE
ADDRESS : 3
CN4 (5P)
R-I/O SLAVE
ADDRESS : 5
【2COP-ROBO】
CN4 (5P)
R-I/O SLAVE
ADDRESS : 1
【HOWA】
CN4 (5P)
STEPPER SLAVE
ADDRESS : C
【WITH INSPECTOR TYPE-B】
CN5 (5P) AP206
R-I/O SLAVE
ADDRESS : 6
【WITH BOBBIN STRIPPER / BOBBIN EXCHANGER】
CN4 (5P)
CN5(5P)
R-I/O SLAVE
ADDRESS : 7
CN4 (5P)
CN5(5P)
SLAVE_I/O_5/5
ADDRESS : A
【WITH INSPECTOR TYPE-B】
CN2A(5P)
STEPPER SLAVE
ADDRESS : D
【1COP-ROBO WITH R.CUTTER】
CN5 (5P) AP207
STEPPER SLAVE
ADDRESS : B
CN5 (5P) AP205
CN6(5P)
STEPPER SLAVE
ADDRESS : D
CN5 (5P) AP207
CN6(5P)
STEPPER SLAVE
ADDRESS : E
【2COP-ROBO WITH R.CUTTER】
CN5 (5P) AP208
STEPPER SLAVE
ADDRESS : E
【2COP-ROBO WITHOUT R.CUTTER】
CN5 (5P) AP208
STEPPER SLAVE
ADDRESS : E
CN5 (5P) AP208
CN6(5P)
STEPPER SLAVE
ADDRESS : C
【2COP-ROBO WITH INSPECTOR TYPE-B】
CN5 (5P) AP206
-1
-2
-3
-4
-5

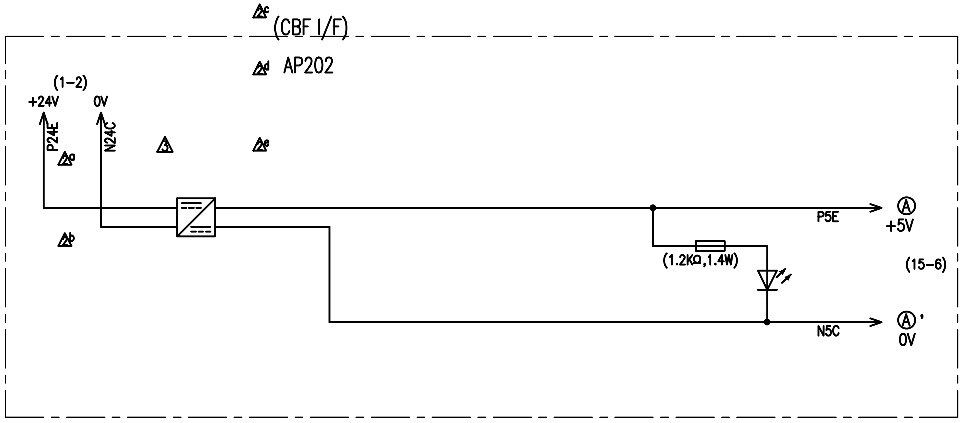
14

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a ~ k<br>~ | 12-11-29 | | INSPECTOR TYPE-B対応<br>ストリッパー準備型対応,誤記修正 | G2 | 宮脇 | 7 | a ~ b | 19-06-28 | | GROUP LINK対応 | G5 | 福沢 |
| | | | | | | | 6 | ~ | 18-10-05 | | BOBBIN EXCHANGER追記 | G4 | 福沢 |
| 2 | a~ f | 12-09-29 | | CBFステッパースレーブ対応 | G1 | 平野 | 5 | a~ b | 14-12-19 | | HOWA対応，誤記訂正 | G4 | 平野 |
| 1 | a~ d | 12-03-23 | | 誤記修正 | G0 | 平野 | 4 | ~ | 13-12-13 | | INSPECTOR TYPE-B 2コップロボ対応 | G3 | 宮脇 |

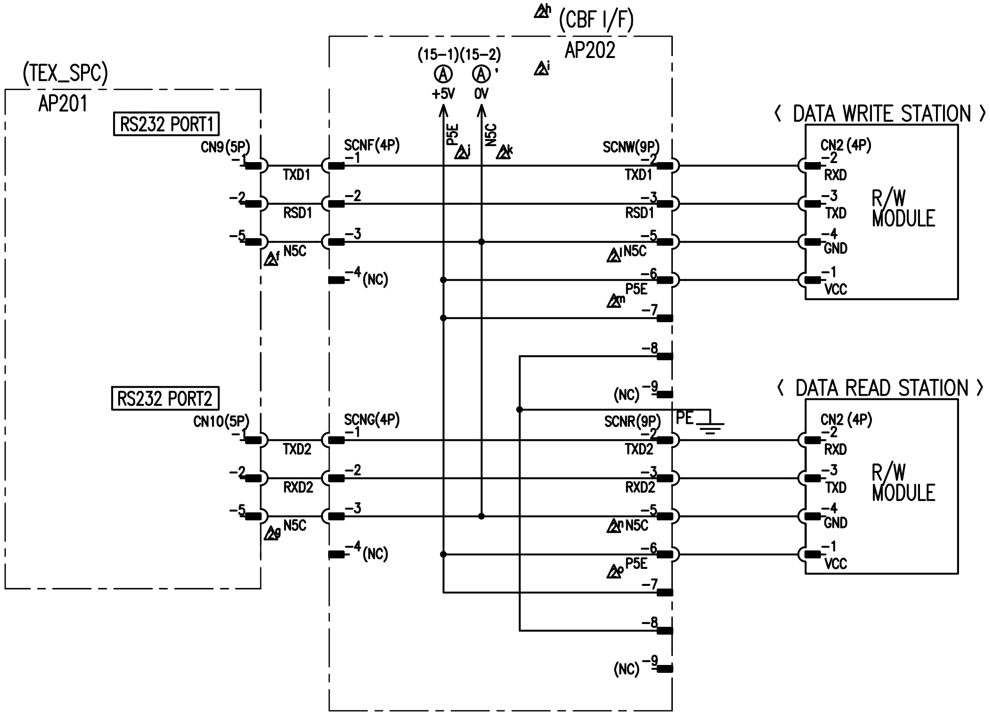
備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019 - 09 - 17 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUNCE DIAGRAM (CAN COMMUNICATION) |
| 設計 DESIGNED | 2011 - 12 - 06 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-G5 / 507 |
| 製図 DRAWN | 2011 - 12 - 06 | K.HIRANO | サイズ SIZE | 2 | | |

muratec MURATA MACHINERY, LTD.



△c (CBF I/F)
△d AP202
(1-2)
+24V
0V
P24E
N24C
△a
△3
△e
△b
P5E
Ⓐ +5V
(1.2KΩ,1.4W)
(15-6)
N5C
Ⓐ' 0V



△h (CBF I/F)
AP202
△i
(TEX_SPC)
AP201
RS232 PORT1
CN9(5P)
-1 TXD1
-2 RSD1
-5 N5C
△f
SCNF(4P)
-1
-2
-3
-4 (NC)
(15-1)(15-2)
Ⓐ +5V
Ⓐ' 0V
P5E △j
N5C △k
SCNW(9P)
-2 TXD1
-3 RSD1
-5 △l N5C
-6 △m P5E
-7
-8
(NC) -9
PE
〈 DATA WRITE STATION 〉
CN2 (4P)
-2 RXD
-3 TXD
-4 GND
-1 VCC
R/W MODULE
RS232 PORT2
CN10(5P)
-1 TXD2
-2 RXD2
-5 N5C
△g
SCNG(4P)
-1
-2
-3
-4 (NC)
SCNR(9P)
-2 TXD2
-3 RXD2
-5 △n N5C
-6 △o P5E
-7
-8
(NC) -9
〈 DATA READ STATION 〉
CN2 (4P)
-2 RXD
-3 TXD
-4 GND
-1 VCC
R/W MODULE

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | ～ | 20-03-27 | | シンボル置換え | H2 | 福沢 | | ～ | | | | | |
| △2 | a～o | 13-09-04 | | 新規CBF I/F基板対応 | H2 | 宮脇 | | ～ | | | | | |
| △1 | a～p | 12-12-17 | | コネクタ番号修正、線番変更、追加 | H1 | 宮脇 | | ～ | | | | | |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020 - 03 - 27 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SEQUENCE DIAGRAM (POWER CIRCUIT) |
| 設計 DESIGNED | 2012 - 11 - 29 | Y.MIYAWAKI | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01B-H2 |
| 製図 DRAWN | 2012 - 11 - 29 | M.YOSHIDA | サイズ SIZE | 2 | | 203 |

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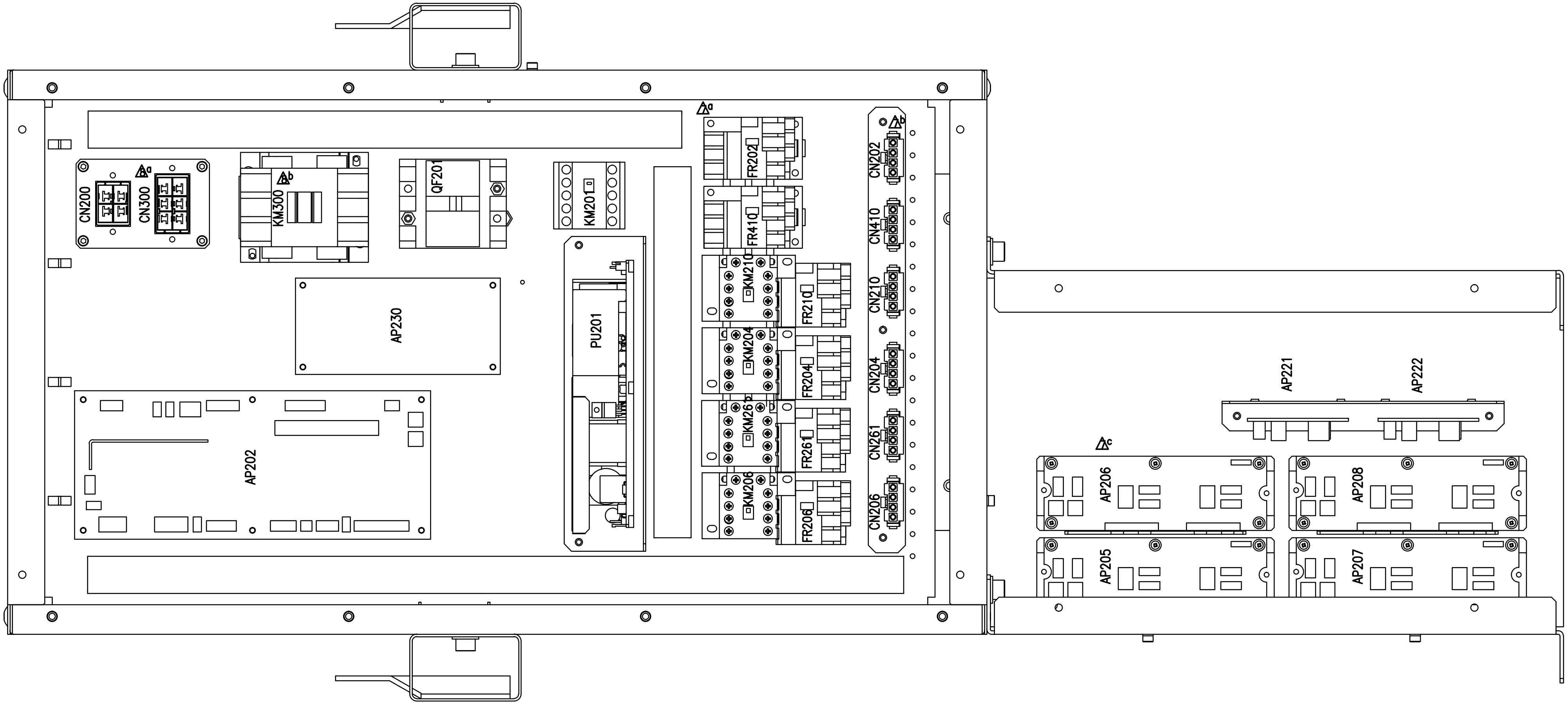
CN200
CN300
△a
KM300
△b
QF201
KM201
△a
FR202
FR410
△b
CN202
CN410
CN210
CN204
CN261
CN206
KM210
FR210
KM204
FR204
KM261
FR261
KM206
FR206
AP230
PU201
AP202
AP221
AP222
△c
AP206
AP208
AP205
AP207

40

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 |  | 16-03-31 |  | トップパンチ対応 | 13 | 平野 | 8 | a～b | 19-09-18 |  | デバイス記号修正 | 16 | 福沢 |
| 3 | a～b | 13-09-04 |  | 新規CBF I/F基板対応、シート番号表記 | 12 | 宮脇 | 7 | a～c | 19-04-04 |  | FR202追加 | 16 | 福沢 |
| 2 | ～ | 12-12-07 |  | 誤記修正 | 11 | 宮脇 | 6 | a～d | 18-10-05 |  | QPRO−EX対応 | 15 | 福沢 |
| 1 | a～b | 12-11-29 |  | INSPECTOR TYPE−B追加 | 11 | 宮脇 | 5 | a～b | 16-08-25 |  | リターンコンベアINV対応 | 14 | 福沢 |

備考
APPENDIX

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
|  |  |  | 機種 MACHINE | 9CF | 名称 NAME | CONSTRUCTION DIAGRAM<br>(CBF CONTROL BOX) |  |
| 検図 CHECKED | 2019 - 09 - 18 | H.SHIMO |  |  |  |  |  |
| 設計 DESIGNED | 2011 - 12 - 06 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF−QL01C−16 | 608 |
| 製図 DRAWN | 2011 - 12 - 06 | K.HIRANO | サイズ SIZE | 2 |  |  |  |

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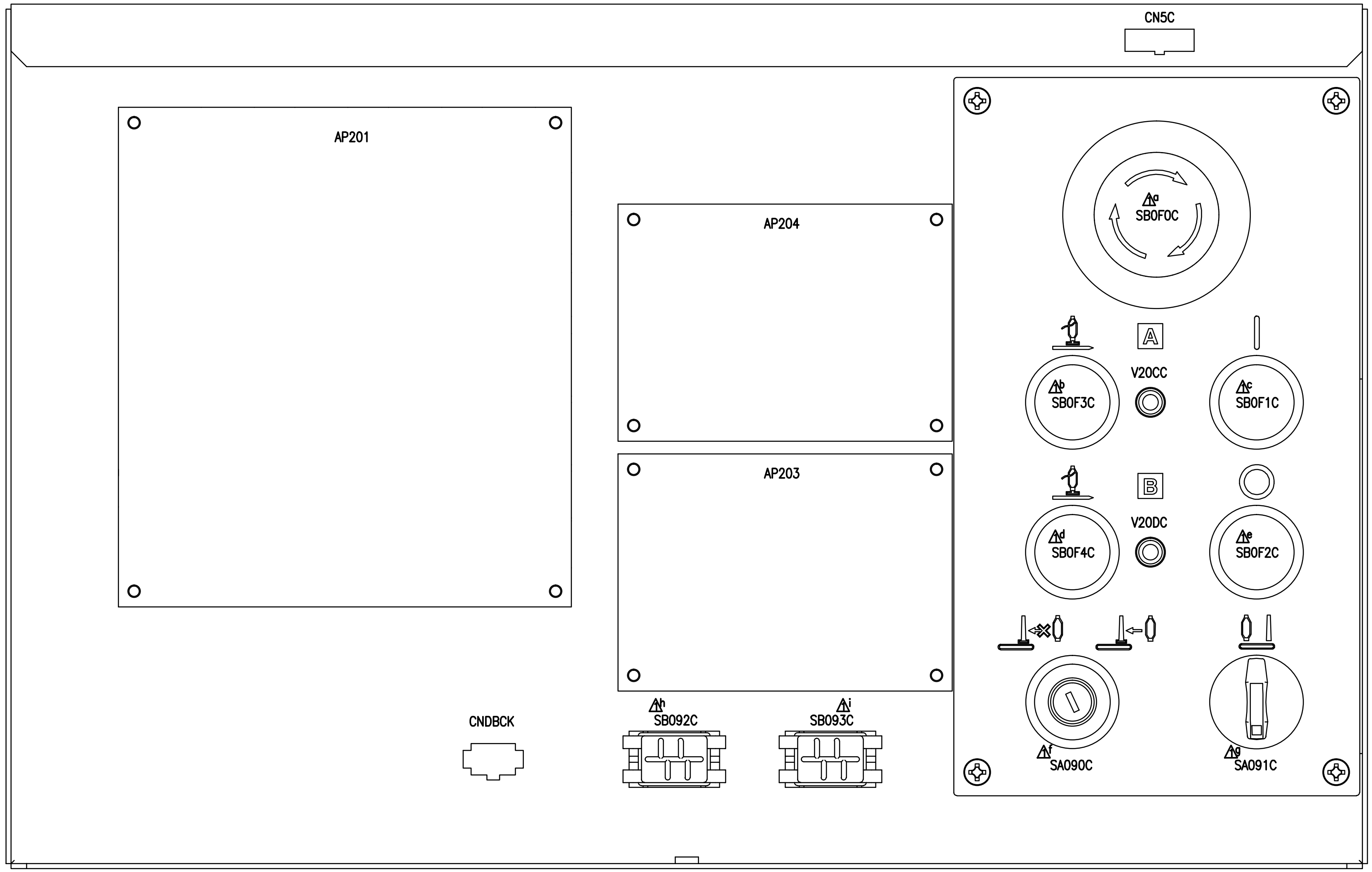
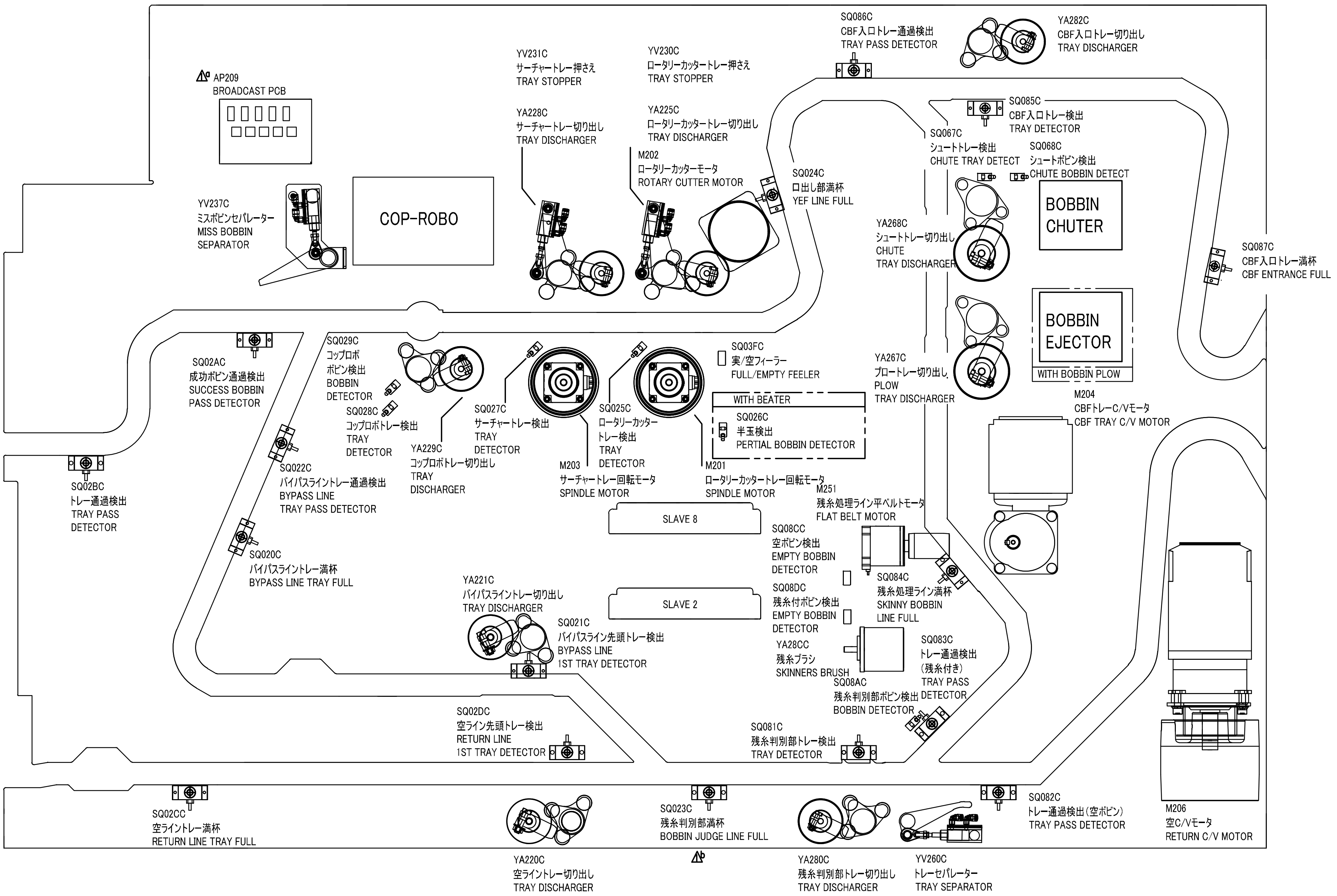

CN5C
AP201
AP204
AP203
⚠a SB0F0C
A
V20CC
⚠b SB0F3C
⚠c SB0F1C
B
V20DC
⚠d SB0F4C
⚠e SB0F2C
⚠f SA090C
⚠g SA091C
CNDBCK
⚠h SB092C
⚠i SB093C

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  | 備考 APPENDIX |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |
| ⚠1 | a~i | 12-05-29 |  | 誤記修正 | 20 | 平野 |  | ~ |  |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |  |

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
|  |  |  | 機種 MACHINE | 9CF | 名称 NAME | CONSTRUCTION DIAGRAM<br>(OPERATION PANEL) |  |
| 検図 CHECKED | 2012 -05 -29 | H.SHIMO |  |  |  |  |  |
| 設計 DESIGNED | 2011 -12 -14 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL01C-20 | 001 |
| 製図 DRAWN | 2011 -12 -14 | K.HIRANO | サイズ SIZE | 2 |  | muratec MURATA MACHINERY, LTD. |  |

A-CAD V3


AP209
BROADCAST PCB
COP-ROBO
YV237C
ミスボビンセパレーター
MISS BOBBIN SEPARATOR
YV231C
サーチャートレー押さえ
TRAY STOPPER
YA228C
サーチャートレー切り出し
TRAY DISCHARGER
YV230C
ロータリーカッタートレー押さえ
TRAY STOPPER
YA225C
ロータリーカッタートレー切り出し
TRAY DISCHARGER
M202
ロータリーカッターモータ
ROTARY CUTTER MOTOR
SQ086C
CBF入口トレー通過検出
TRAY PASS DETECTOR
YA282C
CBF入口トレー切り出し
TRAY DISCHARGER
SQ085C
CBF入口トレー検出
TRAY DETECTOR
SQ067C
シュートトレー検出
CHUTE TRAY DETECT
SQ068C
シュートボビン検出
CHUTE BOBBIN DETECT
SQ024C
口出し部満杯
YEF LINE FULL
BOBBIN CHUTER
YA268C
シュートトレー切り出し
CHUTE TRAY DISCHARGER
SQ087C
CBF入口トレー満杯
CBF ENTRANCE FULL
BOBBIN EJECTOR
WITH BOBBIN PLOW
YA267C
プロートレー切り出し
PLOW TRAY DISCHARGER
M204
CBFトレーC/Vモータ
CBF TRAY C/V MOTOR
SQ02AC
成功ボビン通過検出
SUCCESS BOBBIN PASS DETECTOR
SQ029C
コップロボ ボビン検出
BOBBIN DETECTOR
SQ028C
コップロボトレー検出
TRAY DETECTOR
YA229C
コップロボトレー切り出し
TRAY DISCHARGER
SQ027C
サーチャートレー検出
TRAY DETECTOR
SQ025C
ロータリーカッター トレー検出
TRAY DETECTOR
SQ03FC
実/空フィーラー
FULL/EMPTY FEELER
WITH BEATER
SQ026C
半玉検出
PERTIAL BOBBIN DETECTOR
M203
サーチャートレー回転モータ
SPINDLE MOTOR
M201
ロータリーカッタートレー回転モータ
SPINDLE MOTOR
M251
残糸処理ライン平ベルトモータ
FLAT BELT MOTOR
SQ02BC
トレー通過検出
TRAY PASS DETECTOR
SQ022C
バイパスライントレー通過検出
BYPASS LINE TRAY PASS DETECTOR
SQ020C
バイパスライントレー満杯
BYPASS LINE TRAY FULL
SLAVE 8
SLAVE 2
SQ08CC
空ボビン検出
EMPTY BOBBIN DETECTOR
SQ084C
残糸処理ライン満杯
SKINNY BOBBIN LINE FULL
SQ08DC
残糸付ボビン検出
EMPTY BOBBIN DETECTOR
YA221C
バイパスライントレー切り出し
TRAY DISCHARGER
SQ021C
バイパスライン先頭トレー検出
BYPASS LINE 1ST TRAY DETECTOR
YA28CC
残糸ブラシ
SKINNERS BRUSH
SQ083C
トレー通過検出 (残糸付き)
TRAY PASS DETECTOR
SQ08AC
残糸判別部ボビン検出
BOBBIN DETECTOR
SQ02DC
空ライン先頭トレー検出
RETURN LINE 1ST TRAY DETECTOR
SQ081C
残糸判別部トレー検出
TRAY DETECTOR
SQ02CC
空ライントレー満杯
RETURN LINE TRAY FULL
SQ023C
残糸判別部満杯
BOBBIN JUDGE LINE FULL
SQ082C
トレー通過検出(空ボビン)
TRAY PASS DETECTOR
M206
空C/Vモータ
RETURN C/V MOTOR
YA220C
空ライントレー切り出し
TRAY DISCHARGER
YA280C
残糸判別部トレー切り出し
TRAY DISCHARGER
YV260C
トレーセパレーター
TRAY SEPARATOR

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | ~ | | | | | | | ~ | | | | | |
| △a | ~b | 19-11-28 | | AP209追加,誤記修正 | 30 | 福沢 | | ~ | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2019-11-28 | H.SHIMO | MACHINE | 9CF | NAME | CONSTRUCTION DIAGRAM<br>(CBF FRAME 1K1C L-H) |
| DESIGNED | 2018-10-10 | E.FUKUZAWA | SCALE | | DRW.NO | 9CF-QL02C-30 / 001 |
| DRAWN | 2018-10-10 | M.YOSHIDA | SIZE | 2 | | |

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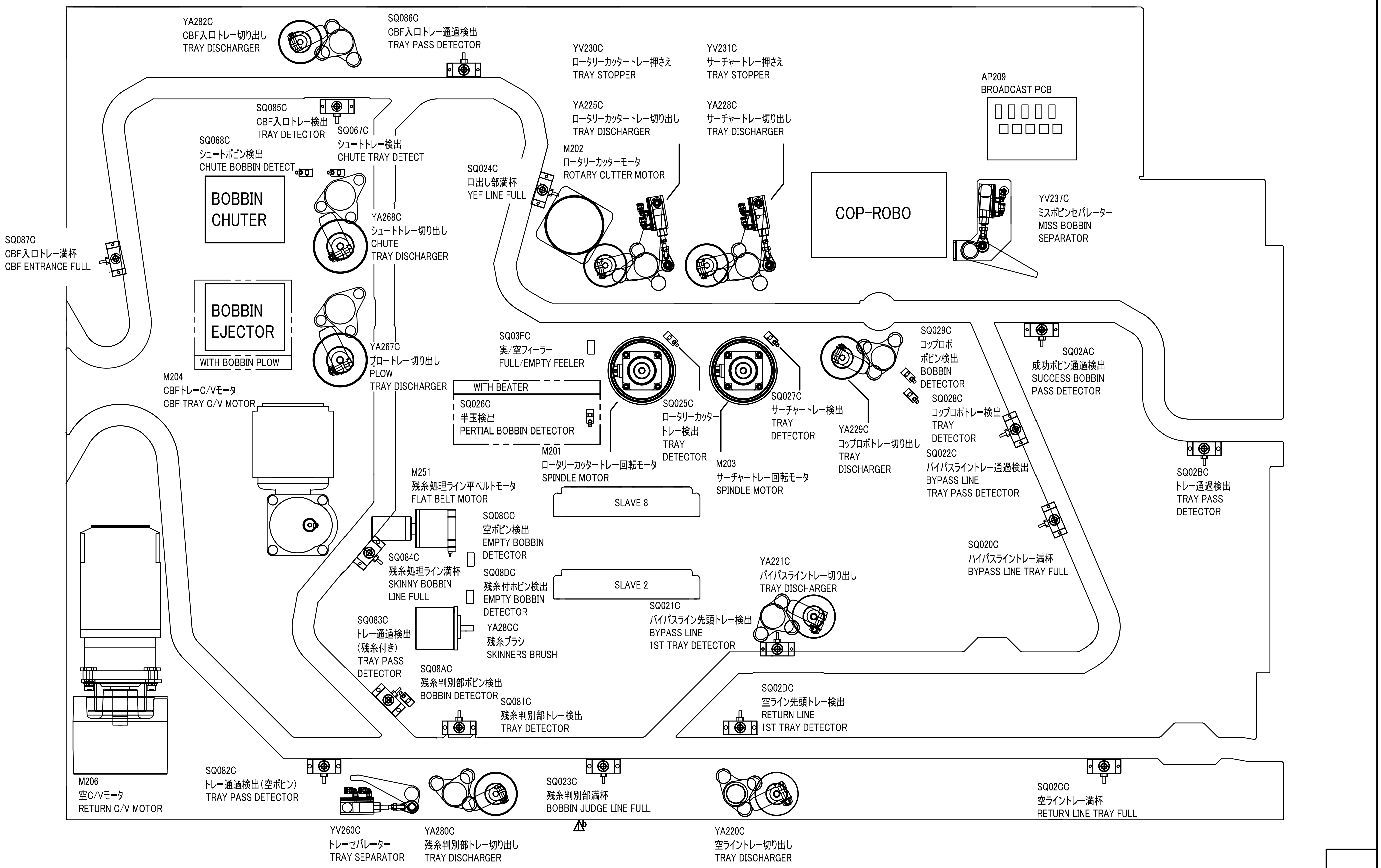
YA282C
CBF入口トレー切り出し
TRAY DISCHARGER
SQ086C
CBF入口トレー通過検出
TRAY PASS DETECTOR
YV230C
ロータリーカッタートレー押さえ
TRAY STOPPER
YV231C
サーチャートレー押さえ
TRAY STOPPER
AP209
BROADCAST PCB
SQ085C
CBF入口トレー検出
TRAY DETECTOR
YA225C
ロータリーカッタートレー切り出し
TRAY DISCHARGER
YA228C
サーチャートレー切り出し
TRAY DISCHARGER
SQ068C
シュートボビン検出
CHUTE BOBBIN DETECT
SQ067C
シュートトレー検出
CHUTE TRAY DETECT
M202
ロータリーカッターモータ
ROTARY CUTTER MOTOR
SQ024C
口出し部満杯
YEF LINE FULL
BOBBIN CHUTER
COP-ROBO
YV237C
ミスボビンセパレーター
MISS BOBBIN SEPARATOR
YA268C
シュートトレー切り出し
CHUTE
TRAY DISCHARGER
SQ087C
CBF入口トレー満杯
CBF ENTRANCE FULL
BOBBIN EJECTOR
WITH BOBBIN PLOW
SQ03FC
実/空フィーラー
FULL/EMPTY FEELER
SQ029C
コップロボ
ボビン検出
BOBBIN
DETECTOR
SQ02AC
成功ボビン通過検出
SUCCESS BOBBIN
PASS DETECTOR
YA267C
プロートレー切り出し
PLOW
TRAY DISCHARGER
M204
CBFトレーC/Vモータ
CBF TRAY C/V MOTOR
WITH BEATER
SQ026C
半玉検出
PERTIAL BOBBIN DETECTOR
SQ025C
ロータリーカッター
トレー検出
TRAY
DETECTOR
SQ027C
サーチャートレー検出
TRAY
DETECTOR
SQ028C
コップロボトレー検出
TRAY
DETECTOR
YA229C
コップロボトレー切り出し
TRAY
DISCHARGER
SQ022C
バイパスライントレー通過検出
BYPASS LINE
TRAY PASS DETECTOR
M201
ロータリーカッタートレー回転モータ
SPINDLE MOTOR
M203
サーチャートレー回転モータ
SPINDLE MOTOR
SQ02BC
トレー通過検出
TRAY PASS
DETECTOR
M251
残糸処理ライン平ベルトモータ
FLAT BELT MOTOR
SLAVE 8
SQ08CC
空ボビン検出
EMPTY BOBBIN
DETECTOR
SQ020C
バイパスライントレー満杯
BYPASS LINE TRAY FULL
SQ084C
残糸処理ライン満杯
SKINNY BOBBIN
LINE FULL
SQ08DC
残糸付ボビン検出
EMPTY BOBBIN
DETECTOR
SLAVE 2
YA221C
バイパスライントレー切り出し
TRAY DISCHARGER
SQ021C
バイパスライン先頭トレー検出
BYPASS LINE
1ST TRAY DETECTOR
SQ083C
トレー通過検出
(残糸付き)
TRAY PASS
DETECTOR
YA28CC
残糸ブラシ
SKINNERS BRUSH
SQ08AC
残糸判別部ボビン検出
BOBBIN DETECTOR
SQ081C
残糸判別部トレー検出
TRAY DETECTOR
SQ02DC
空ライン先頭トレー検出
RETURN LINE
1ST TRAY DETECTOR
M206
空C/Vモータ
RETURN C/V MOTOR
SQ082C
トレー通過検出(空ボビン)
TRAY PASS DETECTOR
SQ023C
残糸判別部満杯
BOBBIN JUDGE LINE FULL
SQ02CC
空ライントレー満杯
RETURN LINE TRAY FULL
YV260C
トレーセパレーター
TRAY SEPARATOR
YA280C
残糸判別部トレー切り出し
TRAY DISCHARGER
YA220C
空ライントレー切り出し
TRAY DISCHARGER

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| | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| | ~ | | | | | | | ~ | | | | | |
| △1 | a ~b | 19-11-28 | | AP209追加､誤記修正 | 40 | 福沢 | | ~ | | | | | |

備考
APPENDIX

| | | | | |
|---|---|---|---|---|
| 検図 CHECKED | 2019－11－28 | H.SHIMO | 機種 MACHINE | 9CF |
| 設計 DESIGNED | 2018－10－10 | E.FUKUZAWA | 尺度 SCALE | |
| 製図 DRAWN | 2018－10－10 | M.YOSHIDA | サイズ SIZE | 2 |

| | | |
|---|---|---|
| 名称 NAME | CONSTRUCTION DIAGRAM<br>(CBF FRAME 1K1C R-H) | |
| 図番 DRW.NO | 9CF-QL02C-40 | 001 |

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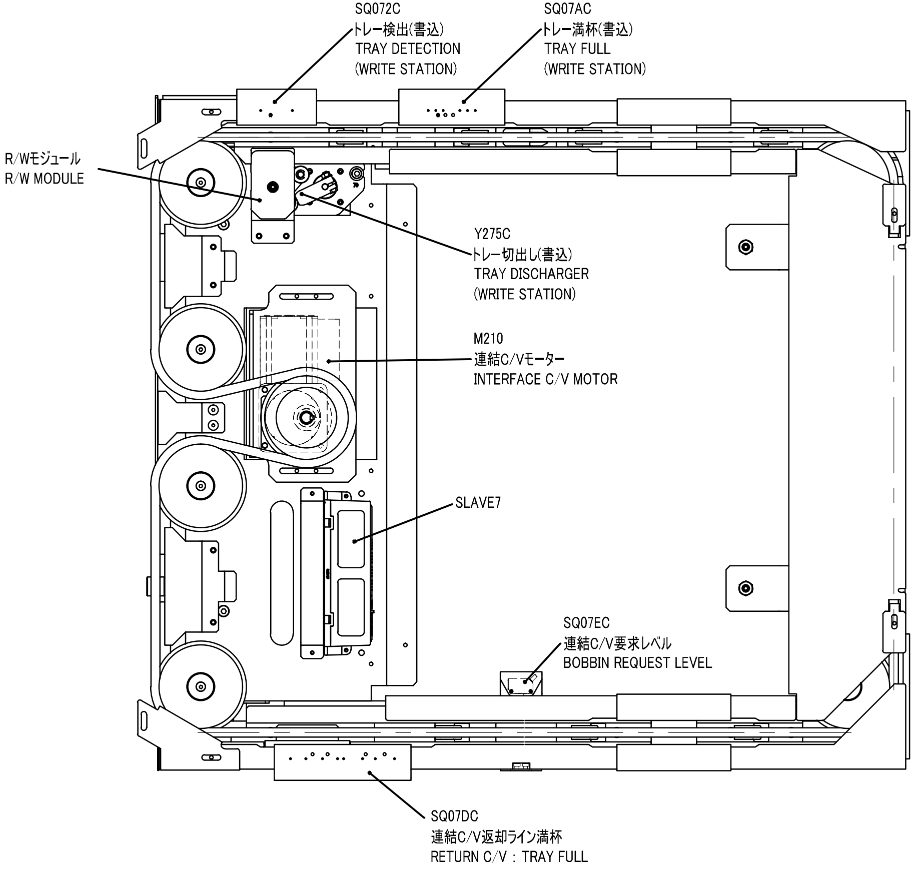
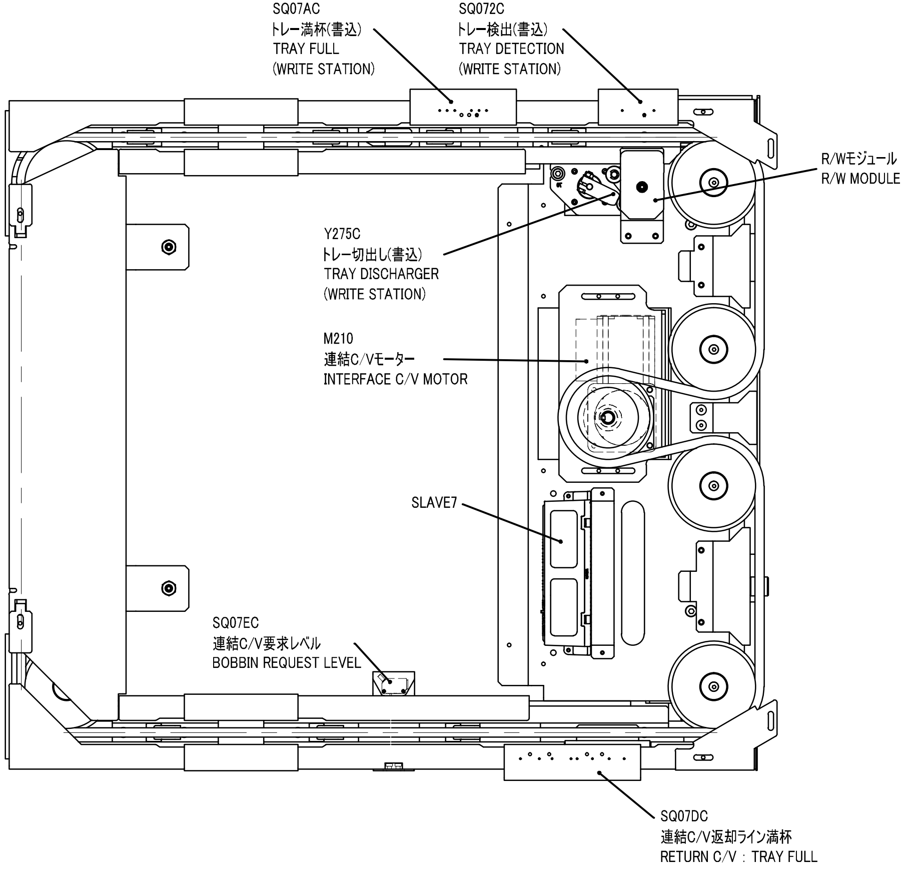
# INTERFACE C/V L-H

| SQ07DC | SQ07EC |
|---|---|
| TOYOTA<br>RIETER<br>ZINSER<br>LAKSHMI<br>BEST<br>JINGWEI<br>TONGHE<br>MARZOLI<br>COGNETEX | TOYOTA<br>HOWA<br>LAKSHMI<br>BEST<br>JINGWEI<br>TONGHE<br>MARZOLI<br>COGNETEX |


SQ072C
トレー検出(書込)
TRAY DETECTION
(WRITE STATION)
SQ07AC
トレー満杯(書込)
TRAY FULL
(WRITE STATION)
R/Wモジュール
R/W MODULE
Y275C
トレー切出し(書込)
TRAY DISCHARGER
(WRITE STATION)
M210
連結C/Vモーター
INTERFACE C/V MOTOR
SLAVE7
SQ07EC
連結C/V要求レベル
BOBBIN REQUEST LEVEL
SQ07DC
連結C/V返却ライン満杯
RETURN C/V : TRAY FULL

# INTERFACE C/V R-H

| SQ07DC | SQ07EC |
|---|---|
| TOYOTA<br>RIETER<br>ZINSER<br>LAKSHMI<br>BEST<br>JINGWEI<br>TONGHE<br>MARZOLI<br>COGNETEX | TOYOTA<br>HOWA<br>LAKSHMI<br>BEST<br>JINGWEI<br>TONGHE<br>MARZOLI<br>COGNETEX |


SQ07AC
トレー満杯(書込)
TRAY FULL
(WRITE STATION)
SQ072C
トレー検出(書込)
TRAY DETECTION
(WRITE STATION)
R/Wモジュール
R/W MODULE
Y275C
トレー切出し(書込)
TRAY DISCHARGER
(WRITE STATION)
M210
連結C/Vモーター
INTERFACE C/V MOTOR
SLAVE7
SQ07EC
連結C/V要求レベル
BOBBIN REQUEST LEVEL
SQ07DC
連結C/V返却ライン満杯
RETURN C/V : TRAY FULL

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
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APPENDIX

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| CHECKED | 2018 - 10 - 10 | H.SHIMO | MACHINE | 9CF | NAME | CONSTRUCTION DIAGRAM<br>(INTERFACE C/V) |  |
| DESIGNED | 2018 - 10 - 10 | E.FUKUZAWA | SCALE |  | DRW.NO | 9CF-QL02C-70 | 000 |
| DRAWN | 2018 - 10 - 10 | M.YOSHIDA | SIZE | 2 |  |  |  |

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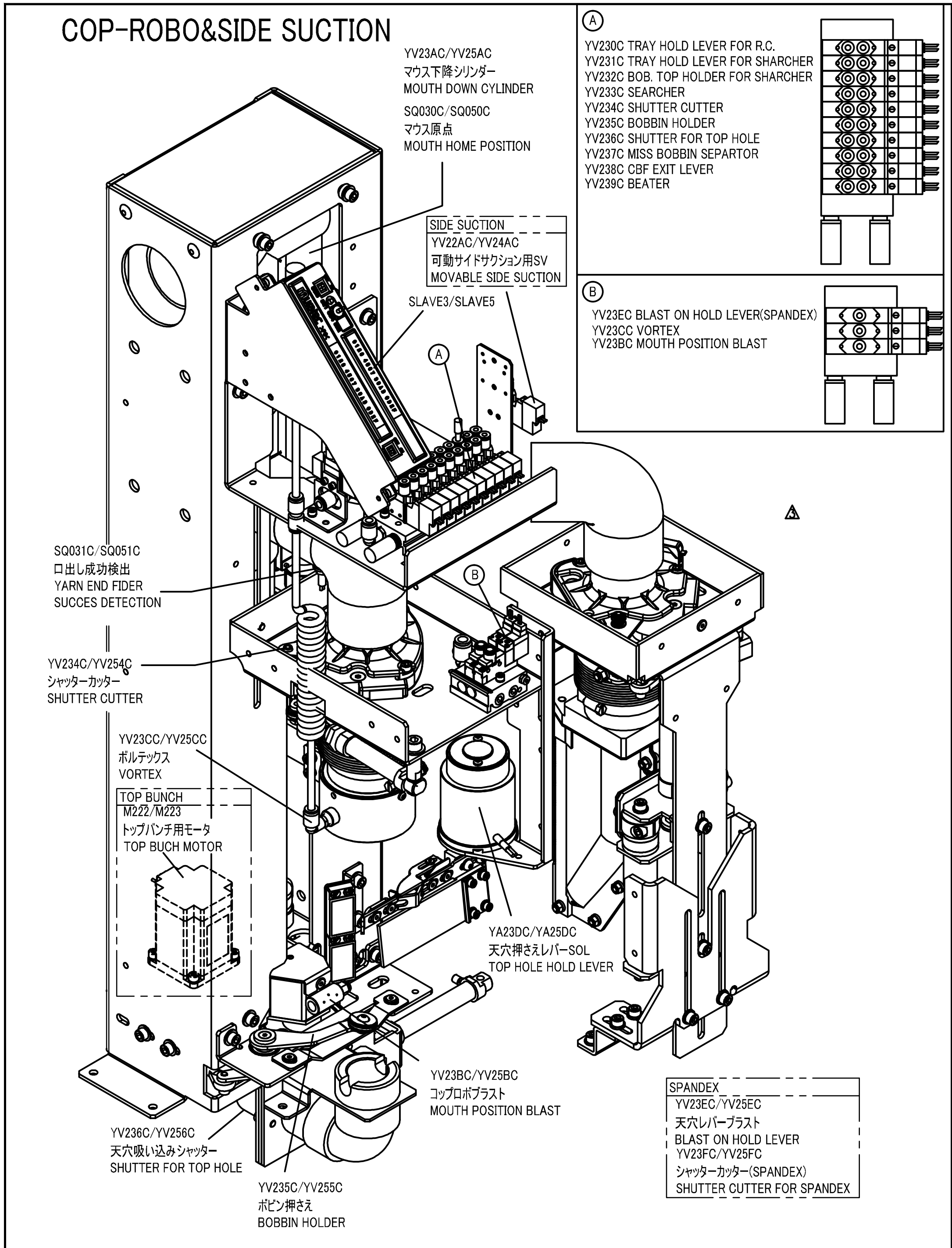
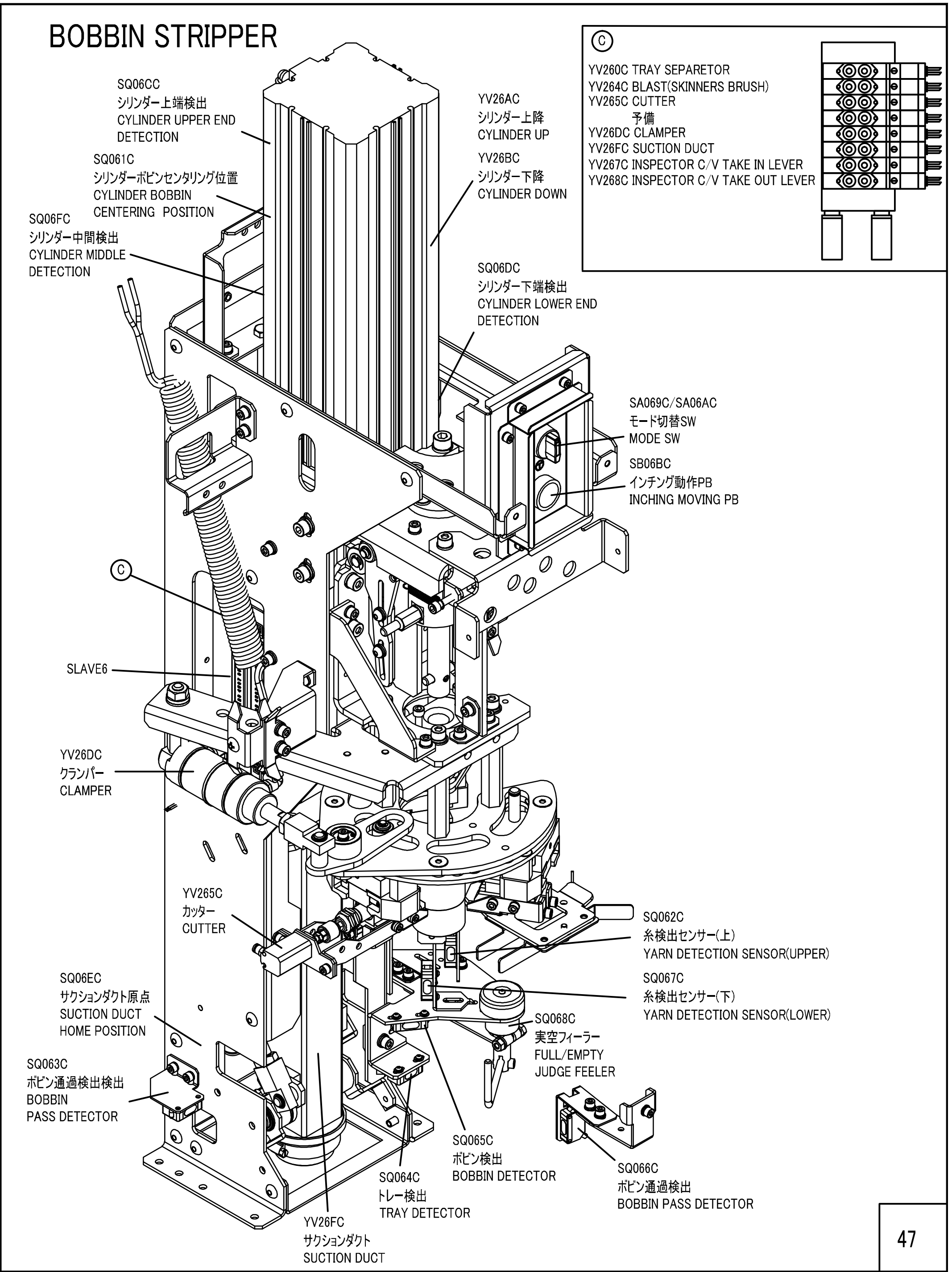
# COP-ROBO&SIDE SUCTION


Ⓐ
YV230C TRAY HOLD LEVER FOR R.C.
YV231C TRAY HOLD LEVER FOR SHARCHER
YV232C BOB. TOP HOLDER FOR SHARCHER
YV233C SEARCHER
YV234C SHUTTER CUTTER
YV235C BOBBIN HOLDER
YV236C SHUTTER FOR TOP HOLE
YV237C MISS BOBBIN SEPARTOR
YV238C CBF EXIT LEVER
YV239C BEATER
Ⓑ
YV23EC BLAST ON HOLD LEVER(SPANDEX)
YV23CC VORTEX
YV23BC MOUTH POSITION BLAST
YV23AC/YV25AC
マウス下降シリンダー
MOUTH DOWN CYLINDER
SQ030C/SQ050C
マウス原点
MOUTH HOME POSITION
SIDE SUCTION
YV22AC/YV24AC
可動サイドサクション用SV
MOVABLE SIDE SUCTION
SLAVE3/SLAVE5
Ⓐ
Ⓑ
3
SQ031C/SQ051C
口出し成功検出
YARN END FIDER
SUCCES DETECTION
YV234C/YV254C
シャッターカッター
SHUTTER CUTTER
YV23CC/YV25CC
ボルテックス
VORTEX
TOP BUNCH
M222/M223
トップバンチ用モータ
TOP BUCH MOTOR
YA23DC/YA25DC
天穴押さえレバーSOL
TOP HOLE HOLD LEVER
YV23BC/YV25BC
コップロボブラスト
MOUTH POSITION BLAST
SPANDEX
YV23EC/YV25EC
天穴レバーブラスト
BLAST ON HOLD LEVER
YV23FC/YV25FC
シャッターカッター(SPANDEX)
SHUTTER CUTTER FOR SPANDEX
YV236C/YV256C
天穴吸い込みシャッター
SHUTTER FOR TOP HOLE
YV235C/YV255C
ボビン押さえ
BOBBIN HOLDER

# BOBBIN STRIPPER


Ⓒ
YV260C TRAY SEPARETOR
YV264C BLAST(SKINNERS BRUSH)
YV265C CUTTER
予備
YV26DC CLAMPER
YV26FC SUCTION DUCT
YV267C INSPECTOR C/V TAKE IN LEVER
YV268C INSPECTOR C/V TAKE OUT LEVER
SQ06CC
シリンダー上端検出
CYLINDER UPPER END
DETECTION
SQ061C
シリンダーボビンセンタリング位置
CYLINDER BOBBIN
CENTERING POSITION
SQ06FC
シリンダー中間検出
CYLINDER MIDDLE
DETECTION
YV26AC
シリンダー上降
CYLINDER UP
YV26BC
シリンダー下降
CYLINDER DOWN
SQ06DC
シリンダー下端検出
CYLINDER LOWER END
DETECTION
SA069C/SA06AC
モード切替SW
MODE SW
SB06BC
インチング動作PB
INCHING MOVING PB
Ⓒ
SLAVE6
YV26DC
クランパー
CLAMPER
YV265C
カッター
CUTTER
SQ062C
糸検出センサー(上)
YARN DETECTION SENSOR(UPPER)
SQ067C
糸検出センサー(下)
YARN DETECTION SENSOR(LOWER)
SQ06EC
サクションダクト原点
SUCTION DUCT
HOME POSITION
SQ068C
実空フィーラー
FULL/EMPTY
JUDGE FEELER
SQ063C
ボビン通過検出検出
BOBBIN
PASS DETECTOR
SQ065C
ボビン検出
BOBBIN DETECTOR
SQ066C
ボビン通過検出
BOBBIN PASS DETECTOR
SQ064C
トレー検出
TRAY DETECTOR
YV26FC
サクションダクト
SUCTION DUCT

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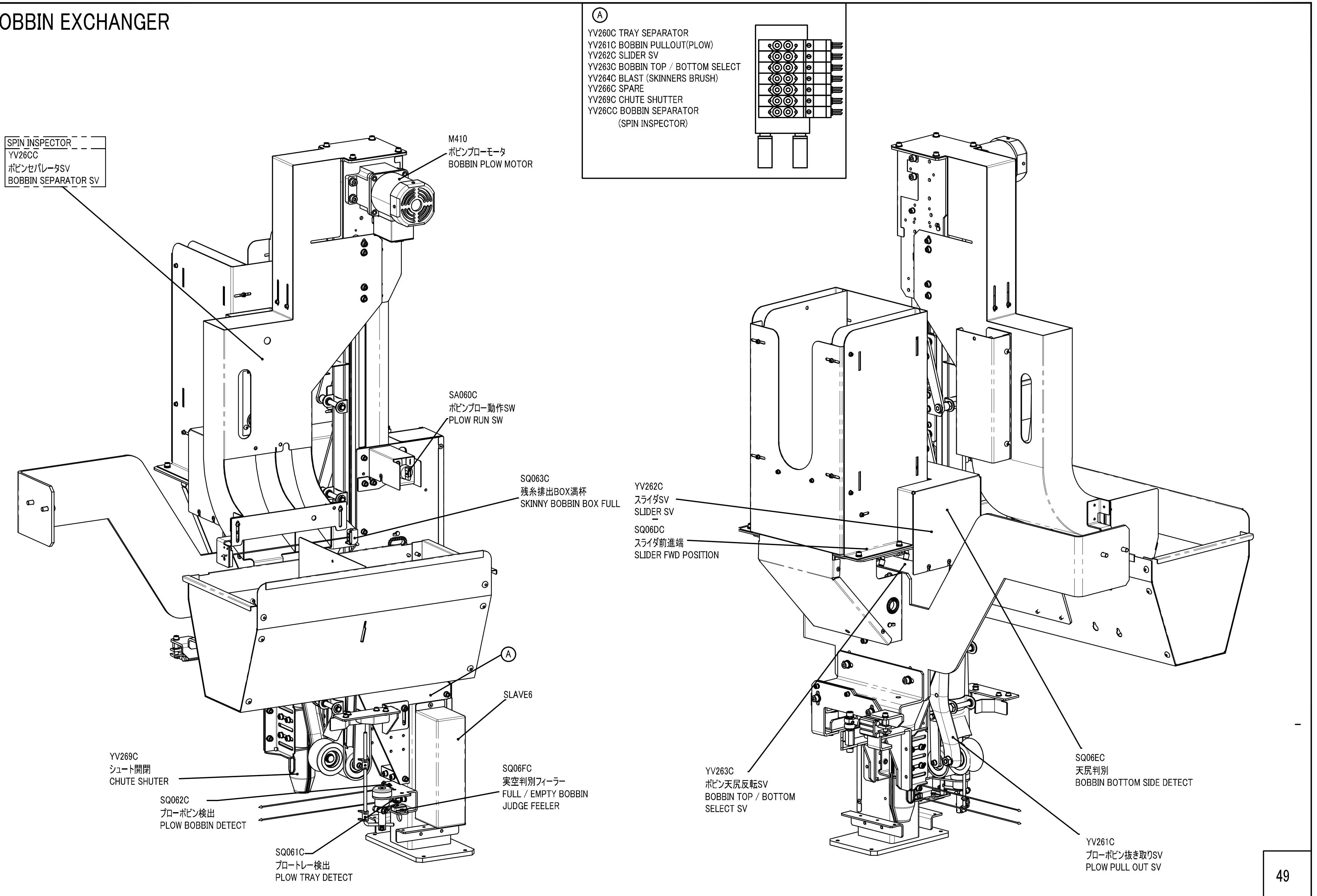
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 17-06-06 |  | 糸端検出(第2ステーション)削除 | 83 | 福沢 |  | ~ |  |  |  |  |  |
| 2 | ~ | 16-04-02 |  | トップバンチ,サイドサクション対応 | 82 | 平野 |  | ~ |  |  |  |  |  |
| 1 | ~ | 14-06-06 |  | SQ061C追加 | 81 | 平野 |  | ~ |  |  |  |  |  |

備考
APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2017 -06 -06 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | CONSTRUCTION DIAGRAM<br>(COP-ROBO,STRIPPER) |
| 設計 DESIGNED | 2013 -02 -16 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL01C-83 303 |
| 製図 DRAWN | 2013 -02 -16 | K.HIRANO | サイズ SIZE | 2 |  | muratec MURATA MACHINERY. LTD. |

A-CAD V4

# BOBBIN EXCHANGER


Ⓐ
YV260C TRAY SEPARATOR
YV261C BOBBIN PULLOUT(PLOW)
YV262C SLIDER SV
YV263C BOBBIN TOP / BOTTOM SELECT
YV264C BLAST (SKINNERS BRUSH)
YV266C SPARE
YV269C CHUTE SHUTTER
YV26CC BOBBIN SEPARATOR
(SPIN INSPECTOR)
SPIN INSPECTOR
YV26CC
ボビンセパレータSV
BOBBIN SEPARATOR SV
M410
ボビンプローモータ
BOBBIN PLOW MOTOR
SA060C
ボビンプロー動作SW
PLOW RUN SW
SQ063C
残糸排出BOX満杯
SKINNY BOBBIN BOX FULL
Ⓐ
SLAVE6
YV269C
シュート開閉
CHUTE SHUTER
SQ062C
プローボビン検出
PLOW BOBBIN DETECT
SQ06FC
実空判別フィーラー
FULL / EMPTY BOBBIN
JUDGE FEELER
SQ061C
プロートレー検出
PLOW TRAY DETECT
YV262C
スライダSV
SLIDER SV
SQ06DC
スライダ前進端
SLIDER FWD POSITION
YV263C
ボビン天尻反転SV
BOBBIN TOP / BOTTOM
SELECT SV
SQ06EC
天尻判別
BOBBIN BOTTOM SIDE DETECT
YV261C
プローボビン抜き取りSV
PLOW PULL OUT SV

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | 備考 APPENDIX |

| | | | | | | |
|---|---|---|---|---|---|---|
| CHECKED | 2018 - 10 - 10 | H.SHIMO | MACHINE | 9CF | NAME | CONSTRUCTION DIAGRAM<br>(BOBBIN EXCHANGER) |
| DESIGNED | 2018 - 10 - 10 | E.FUKUZAWA | SCALE | | DRW.NO | 9CF-QL02C-A0 / 000 |
| DRAWN | 2018 - 10 - 10 | M.YOSHIDA | SIZE | 2 | | |

TACTILE PUSHBUTTON SW

| SW | NOTE | SETTING |
|---|---|---|
| SW1 | RESET<br>リセット | OFF |

SW2 DIP SW

| BIT | NOTE | SETTING |
|---|---|---|
| 1 | NO USE | OFF |
| 2 | NO USE | OFF |
| 3 | NO USE | OFF |
| 4 | NO USE | OFF |

SW3 DIP SW

| BIT | NOTE | SETTING |
|---|---|---|
| 1 | ON–ERASE SRAM BACKUP DATA/OFF–NORMAL<br>ON–SRAMバックアップデータ消去/OFF–通常運転 | OFF |
| 2 | COLD START : ON–START/OFF–NORMAL<br>コールドスタート : ON–起動/OFF–通常 | OFF |
| 3 | SETTING FOR SYSTEM PROGRAM CONDITION AT CPU RESET<br>CPUリセット時のシステムプログラムの状態設定<br>ON–STOP/OFF–RUN | OFF |
| 4 | SETTING FOR SEQUENCE PROGRAM CONDITION AT CPU RESET<br>CPUリセット時のシーケンスプログラムの状態設定<br>ON–STOP/OFF–RUN | OFF |

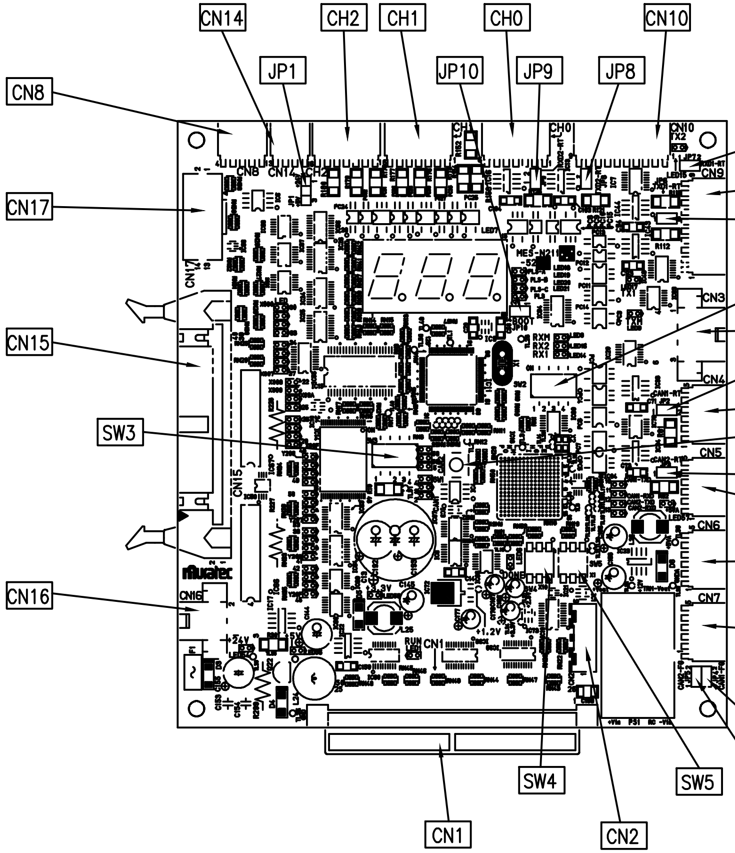
ROTARY SW

| SW | NOTE | SETTING |
|---|---|---|
| SW4 | CAN ADDRESS SETTING UPPER FIGURE BCD(0~9)<br>CANアドレス設定　上位BCD(0~9) | 0 |
| SW5 | CAN ADDRESS SETTING LOWER FIGURE BCD(0~9)<br>CANアドレス設定　下位BCD(0~9) | 3 |

JUMPER SETTING

| | NOTE | SETTING | |
|---|---|---|---|
| JP1 | STATIC PRESSURE SENSOR SUPPLY VOLTAGE : ON – +24V/OFF – +5V<br>静圧センサ電源　ON–供給電源+24V/OFF–供給電源+5V | OFF | |
| JP2 | CAN1 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>CAN1ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | WITHOUT INSPECTOR TYPE–A<br>WITH　　INSPECTOR TYPE–A | ON<br>OFF |
| JP3 | CAN2 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>CAN2ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | OFF | |
| JP4 | CAN1 FRAME GRAND ON–SHIELD LINE JOINT TO FG/OFF–OPEN<br>CAN1フレームグランド　ON–シールドをFGに接地/OFF–開放 | ON | |
| JP5 | CAN2 FRAME GRAND ON–SHIELD LINE JOINT TO FG/OFF–OPEN<br>CAN2フレームグランド　ON–シールドをFGに接地/OFF–開放 | ON | |
| JP6 | RS485 TXD1 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>RS485 送信側1ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | OFF | |
| JP7 | RS485 RXD1 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>RS485 受信側1ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | OFF | |
| JP8 | RS485 TXD2 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>RS485 送信側2ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | OFF | |
| JP9 | RS485 RXD2 TEMINATION RESISTANCE : ON–END OF NETWORK/OFF–OTHER<br>RS485 受信側2ターミネーション抵抗 : ON–ネットワークの終端/OFF–それ以外 | OFF | |
| JP10 | CPU BOOT MODE START : ON–START/OFF–NORMAL<br>CPUブートモード起動 : ON–起動/OFF–通常 | OFF | |

△3



AP201(TEX–SPC MES–N2100–52*/62*)

50

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 17–10–24 | | JP2変更 | B3 | 福沢 | | ~ | | | | | |
| 2 | ~ | 17–02–07 | | JP4 ONに変更 | B2 | 福沢 | | ~ | | | | | |
| 1 | ~ | 12–10–26 | | JP5 ONに変更 | B1 | 平野 | | ~ | | | | | |

APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | MACHINE | 9CF | NAME | CONSTRUCTION DIAGRAM<br>(TEX SPC) |
| CHECKED | 2017 –10 –24 | H.SHIMO | | | | |
| DESIGNED | 2011 –12 –14 | K.HIRANO | SCALE | | DRW.NO | 9CF–QL01C–B3 | 303 |
| DRAWN | 2011 –12 –14 | M.YOSHIDA | SIZE | 2 | | |

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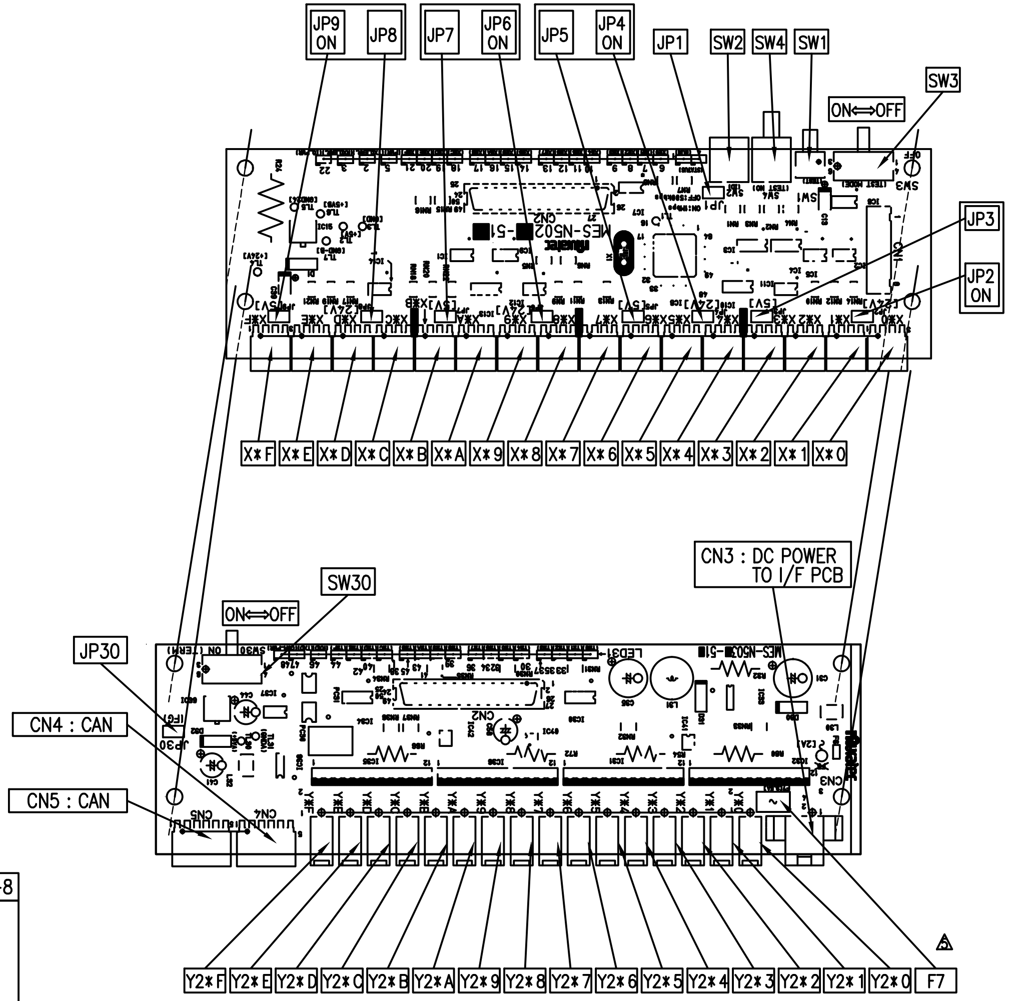
|  | NOTE | HOWA<br>SL-1 | SL-2 | SL-3 | WITH STRIPPER / BOBBIN EXCHANGER<br>SL-6 | SL-7 | SL-8 |
|---|---|---|---|---|---|---|---|
| JP1 | CAN SPEED SETTING : ON-1Mbps/OFF-500kbps<br>CANスピード設定 : ON-1Mbps/OFF-500kbps | OFF | OFF | OFF | OFF | OFF | OFF |
| JP2 | CHOICE SUPPLY POWER FOR X10-X13 : ON-DC24V/OFF-OTHER<br>X*0-X*3 供給電源選択 : ON-DC24V/OFF-その他 | ON | ON | ON | ON | ON | ON |
| JP3 | CHOICE SUPPLY POWER FOR X10-X13 : ON-DC5V/OFF-OTHER<br>X*0-X*3 供給電源選択 : ON-DC5V/OFF-その他 | OFF | OFF | OFF | OFF | OFF | OFF |
| JP4 | CHOICE SUPPLY POWER FOR X14-X17 : ON-DC24V/OFF-OTHER<br>X*4-X*7 供給電源選択 : ON-DC24V/OFF-その他 | ON | ON | ON | ON | ON | ON |
| JP5 | CHOICE SUPPLY POWER FOR X14-X17 : ON-DC5V/OFF-OTHER<br>X*4-X*7 供給電源選択 : ON-DC5V/OFF-その他 | OFF | OFF | OFF | OFF | OFF | OFF |
| JP6 | CHOICE SUPPLY POWER FOR X18-X1B : ON-DC24V/OFF-OTHER<br>X*8-X*B 供給電源選択 : ON-DC24V/OFF-その他 | ON | ON | ON | WITH STRIPPER OFF<br>WITH BOBBIN EXCHANGER ON | ON | ON |
| JP7 | CHOICE SUPPLY POWER FOR X18-X1B : ON-DC5V/OFF-OTHER<br>X*8-X*B 供給電源選択 : ON-DC5V/OFF-その他 | OFF | OFF | OFF | WITH STRIPPER ON<br>WITH BOBBIN EXCHANGER OFF | OFF | OFF |
| JP8 | CHOICE SUPPLY POWER FOR X1C-X1F : ON-DC24V/OFF-OTHER<br>X*C-X*F 供給電源選択 : ON-DC24V/OFF-その他 | OFF | ON | OFF | OFF | ON | OFF |
| JP9 | CHOICE SUPPLY POWER FOR X1C-X1F : ON-DC5V/OFF-OTHER<br>X*C-X*F 供給電源選択 : ON-DC5V/OFF-その他 | ON | OFF | ON | ON | OFF | ON |
| JP30 | ON-SHIELD LINE JOINT TO FG/OFF-OPEN<br>ON-シールドをFGに接地/OFF-開放 | ON | ON | ON | ON | ON | ON |

| SW | NOTE | HOWA<br>SL-1 | SL-2 | SL-3 | WITH STRIPPER / BOBBIN EXCHANGER<br>SL-6 | SL-7 | SL-8 |
|---|---|---|---|---|---|---|---|
| SW1 | ON-DEVICE TEST<br>1)CHANGE OUTPUT TEST MODE : SW3-ON<br>2)SET THE TEST DEVICE No. : SW4<br>3)PUSH SW1<br>4)AFTER CHECKING SET NORMAL MODE : SW3-OFF<br>ON-デバイステスト<br>1)出力テストモードへ変更 : SW3-ON<br>2)テストデバイス番号を設定 : SW4<br>3)SW1を押す<br>4)チェック後、通常モードへ設定 : SW3-OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| SW2 | CAN ID SETTING(0-F)<br>CAN ID設定(0-F) | 1 | 2 | 3 | 6 | 7 | 8 |
| SW3 | ON-OUTPUT TEST MODE/OFF-NORMAL<br>ON-出力テストモード/OFF-通常 | OFF | OFF | OFF | OFF | OFF | OFF |
| SW4 | SET THE DEVICE No. FOR OUTPUT TEST(SW3-ON) : 0-F<br>出力テスト用のデバイスNo.(SW3-ON) | 0 | 0 | 0 | 0 | 0 | 0 |
| SW30 | CAN TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>CANターミネーション抵抗 : ON-ネットワークの終端/OFF-それ以外 | ON | OFF | OFF | OFF | WITH INSPECTOR C/V HOWA OFF<br>WITHOUT INSPECTOR C/V EX HOWA ON | OFF |



| NO. | USE PLACE | INPUT | OUTPUT | CONTROL DIVISION |
|---|---|---|---|---|
| SL-1 | WASTE YARN CLEANER | X10-X1F | Y210-Y21F | CBF CONTROL BOX |
| SL-2 | CBF CONVEYER(F) | X20-X2F | Y220-Y22F |  |
| SL-3 | COP-ROBO(F) | X30-X3F | Y230-Y23F |  |
| SL-6 | BOBBIN STRIPPER / BOBBIN EXCHANGER | X60-X6F | Y260-Y26F |  |
| SL-7 | CONNECTION CONVAYER | X70-X7F | Y270-Y27F |  |
| SL-8 | CBF CONVEYER(S) | X80-X8F | Y280-Y28F |  |

## R-I/O SLAVE MES-N5020-4*

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|
| 5 | ~ | 20-01-30 |  | ヒューズ追加 | C4 | 福沢 |
| 4 | a~f | 18-10-25 |  | ボビンエクスチェンジャー対応 | C3 | 福沢 |
| 3 | a~f | 14-12-17 |  | HOWA対応,名称修正 | C2 | 平野 |
| 2 | ~ | 12-12-07 |  | 誤記修正 | C1 | 宮脇 |
| 1 | a~d | 12-11-29 |  | INSPECTOR TYPE-B追加 |  |  |
|  | ~ |  |  | ストリッパー準備型対応 | C1 | 宮脇 |

備考 APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2020-01-30 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | CONSTRUCTION DIAGRAM (R-I/O SLAVE) |
| 設計 DESIGNED | 2011-12-06 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL01C-C4 |
| 製図 DRAWN | 2011-12-06 | M.YOSHIDA | サイズ SIZE | 2 |  | 405 |

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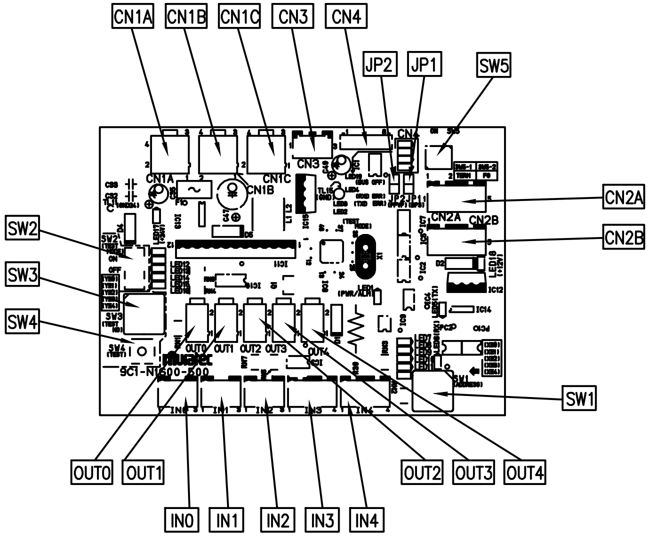
| SW | NOTE | △a<br>SL-9 | WITH INSPECTOR TYPE-B<br>SL-A | SL-F |
|---|---|---|---|---|
| SW1 | CAN ID SETTING(0-F)<br>CAN ID設定(0-F) | 9 | A | F |
| SW2 | ON-OUTPUT TEST MODE/OFF-NORMAL<br>ON-出力テストモード/OFF-通常 | OFF | OFF | OFF |
| SW3 | SET THE DEVICE No. FOR OUTPUT TEST(SW3-ON) : 0-F<br>出力テスト用のデバイスNo.(SW2-ON) | 0 | 0 | 0 |
| SW4 | ON-DEVICE TEST<br>1)CHANGE OUTPUT TEST MODE : SW2-ON<br>2)SET THE TEST DEVICE No. : SW3<br>3)PUSH SW4<br>4)AFTER CHECKING SET NORMAL MODE : SW2-OFF<br>ON-デバイステスト<br>1)出力テストモードへ変更 : SW2-ON<br>2)テストデバイス番号を設定 : SW3<br>3)SW4を押す<br>4)チェック後、通常モードへ設定 : SW2-OFF | OFF | OFF | OFF |
| SW5-1 | CAN TEMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>CANターミネーション抵抗 : ON-ネットワークの終端/OFF-それ以外 | OFF | ON | ON |
| SW5-2 | ON-SHIELD LINE JOINT TO FG/OFF-OPEN<br>ON-シールドをFGに接地/OFF-開放 | OFF | OFF | OFF |

|  | NOTE | △b<br>SL-9 | WITH INSPECTOR TYPE-B<br>SL-A | SL-F |
|---|---|---|---|---|
| JP1 | CAN SPEED SETTING : ON-1Mbps/OFF-500kbps<br>CANスピード設定 : ON-1Mbps/OFF-500kbps | OFF | OFF | OFF |
| JP2 | NO USE | OFF | OFF | OFF |



△c

AP203/AP204/AP211(SLAVE I/O_5/5 9C1-N1600-50*)

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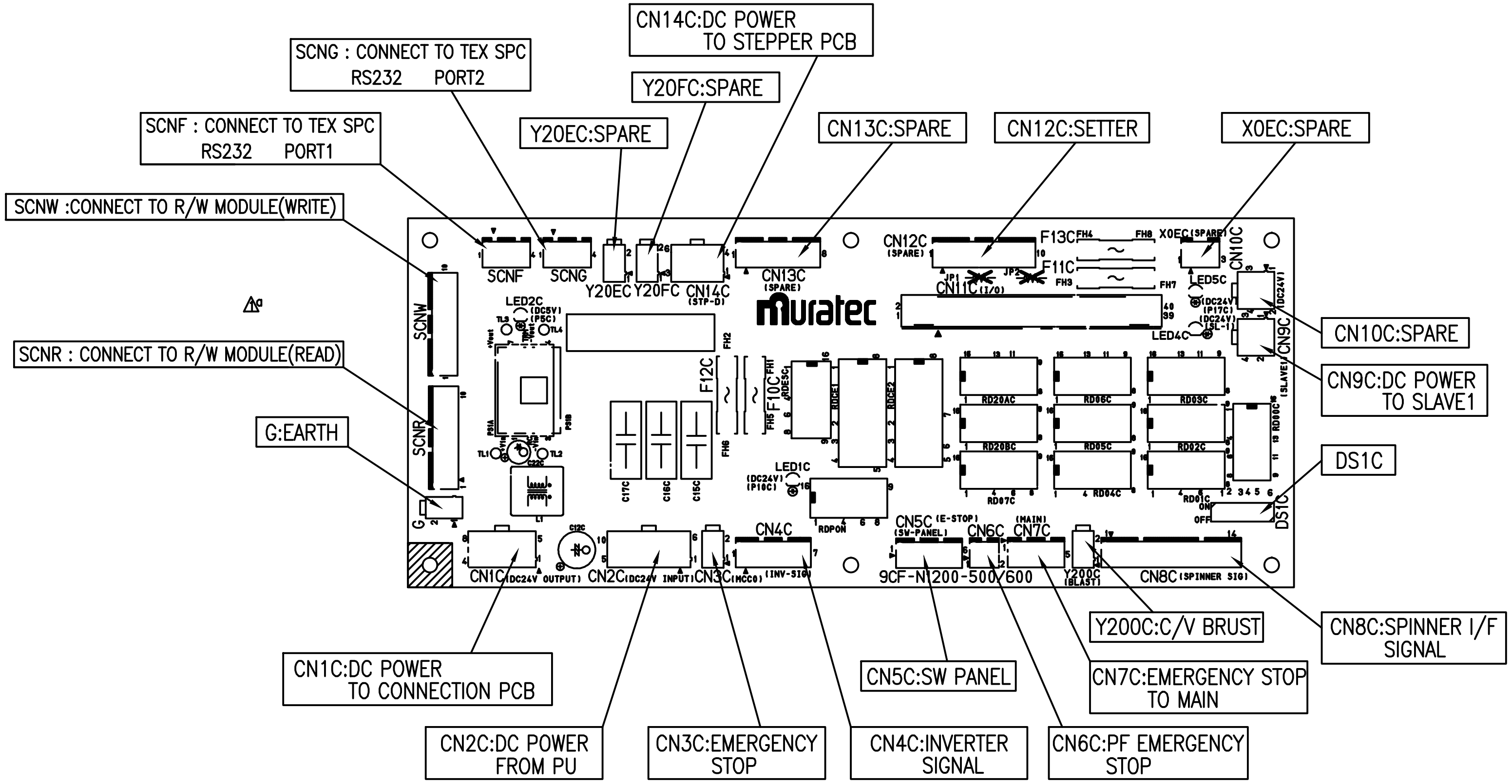
△2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| △2 | ~ | 12-12-07 |  | 誤記修正 | D1 | 宮脇 |  | ~ |  |  |  |  |  |
| △1 | a~c | 12-11-29 |  | INSPECTOR TYPE-B追加 | D1 | 宮脇 |  | ~ |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |

備考 APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2012 -12 -07 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | SETTING DIAGRAM<br>(SLAVE I/O 5/5) |
| 設計 DESIGNED | 2011 -12 -06 | K.HIRANO | 尺度 SCALE |  | 番号 DRW.NO | 9CF-QL01C-D1 102 |
| 製図 DRAWN | 2011 -12 -06 | M.YOSHIDA | サイズ SIZE | 2 |  | Muratec MURATA MACHINERY. LTD. |

A-CAD V3


SCNG : CONNECT TO TEX SPC RS232 PORT2
CN14C:DC POWER TO STEPPER PCB
Y20FC:SPARE
SCNF : CONNECT TO TEX SPC RS232 PORT1
Y20EC:SPARE
CN13C:SPARE
CN12C:SETTER
X0EC:SPARE
SCNW :CONNECT TO R/W MODULE(WRITE)
SCNR : CONNECT TO R/W MODULE(READ)
G:EARTH
CN10C:SPARE
CN9C:DC POWER TO SLAVE1
DS1C
a
muratec
SCNF
SCNG
Y20EC
Y20FC
CN14C
CN13C
CN12C
CN11C
F13C
F11C
F12C
F10C
X0EC
LED5C
LED4C
LED2C
LED1C
CN10C
CN9C
SCNW
SCNR
G
CN1C
CN2C
CN3C
CN4C
CN5C
CN6C
CN7C
Y200C
CN8C
RDPON
9CF-N1200-500/600
Y200C:C/V BRUST
CN8C:SPINNER I/F SIGNAL
CN1C:DC POWER TO CONNECTION PCB
CN5C:SW PANEL
CN7C:EMERGENCY STOP TO MAIN
CN2C:DC POWER FROM PU
CN3C:EMERGENCY STOP
CN4C:INVERTER SIGNAL
CN6C:PF EMERGENCY STOP

DS1C

| BIT | NOTE | SETTING |
|---|---|---|
| 1 | NO USE:予 備 | OFF |
| 2 | NO USE:予 備 | OFF |
| 3 | NO USE:予 備 | OFF |
| 4 | NO USE:予 備 | OFF |
| 5 | NO USE:予 備 | OFF |
| 6 | NO USE:予 備 | OFF |

b

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|
| 1 | a～b | 13-12-03 | | 新規CBF I/F基板対応 | E1 | 宮脇 |

備考 APPENDIX

| | | | | |
|---|---|---|---|---|
| 検図 CHECKED | 2013 -12 -03 | H.SHIMO | 機種 MACHINE | 9CF |
| 設計 DESIGNED | 2011 -12 -06 | K.HIRANO | 尺度 SCALE | |
| 製図 DRAWN | 2011 -12 -06 | M.YOSHIDA | サイズ SIZE | 2 |

名称 NAME: SETTING DIAGRAM (CBF I/F PCB)

図番 DRW.NO: 9CF-QL01C-E1 101

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A-CAD V4

SW1 ROTARY SW

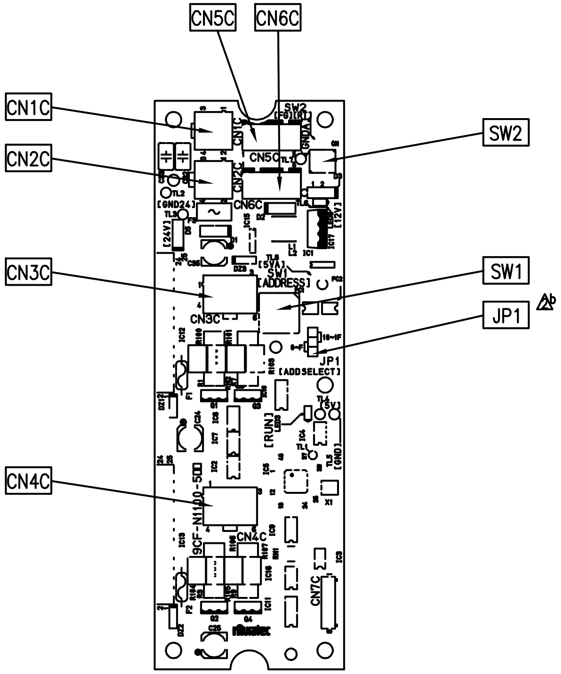
| | | | WITH INSPECTOR TYPE-B | WITH R.C. | 2CR |
|---|---|---|---|---|---|
| SW | NOTE | AP205 | AP206 | AP207 | AP208 |
| SW1 | CAN ADDRESS SETTING (0~F)<br>CANアドレス設定 (0~F) | B | C | D | E |

SW2 DIP SW

| | | | WITH INSPECTOR TYPE-B | WITH R.C. | 2CR |
|---|---|---|---|---|---|
| BIT | NOTE | AP205 | AP206 | AP207 | AP208 |
| 1 | CAN FRAME GROUND ON-SHIELD LINE JOINT TO FG/OFF-OPEN<br>CANフレームグランド ON-シールドをFGに接地/OFF-開放 | OFF | OFF | OFF | OFF |
| 2 | CAN TERMINATION RESISTANCE : ON-END OF NETWORK/OFF-OTHER<br>CANターミネーション抵抗 : ON-ネットワークの終端/OFF-それ以外 | OFF | OFF | OFF | OFF |

△a JUMPER SETTING

| | | | WITH INSPECTOR TYPE-B | WITH R.C. | 2CR |
|---|---|---|---|---|---|
| | NOTE | AP205 | AP206 | AP207 | AP208 |
| JP1 | CAN ADDRESS SELECT (0~F) or (10~1F)<br>CANアドレス選択 (0~F) or (10~1F) | 0~F | 0~F | 0~F | 0~F |

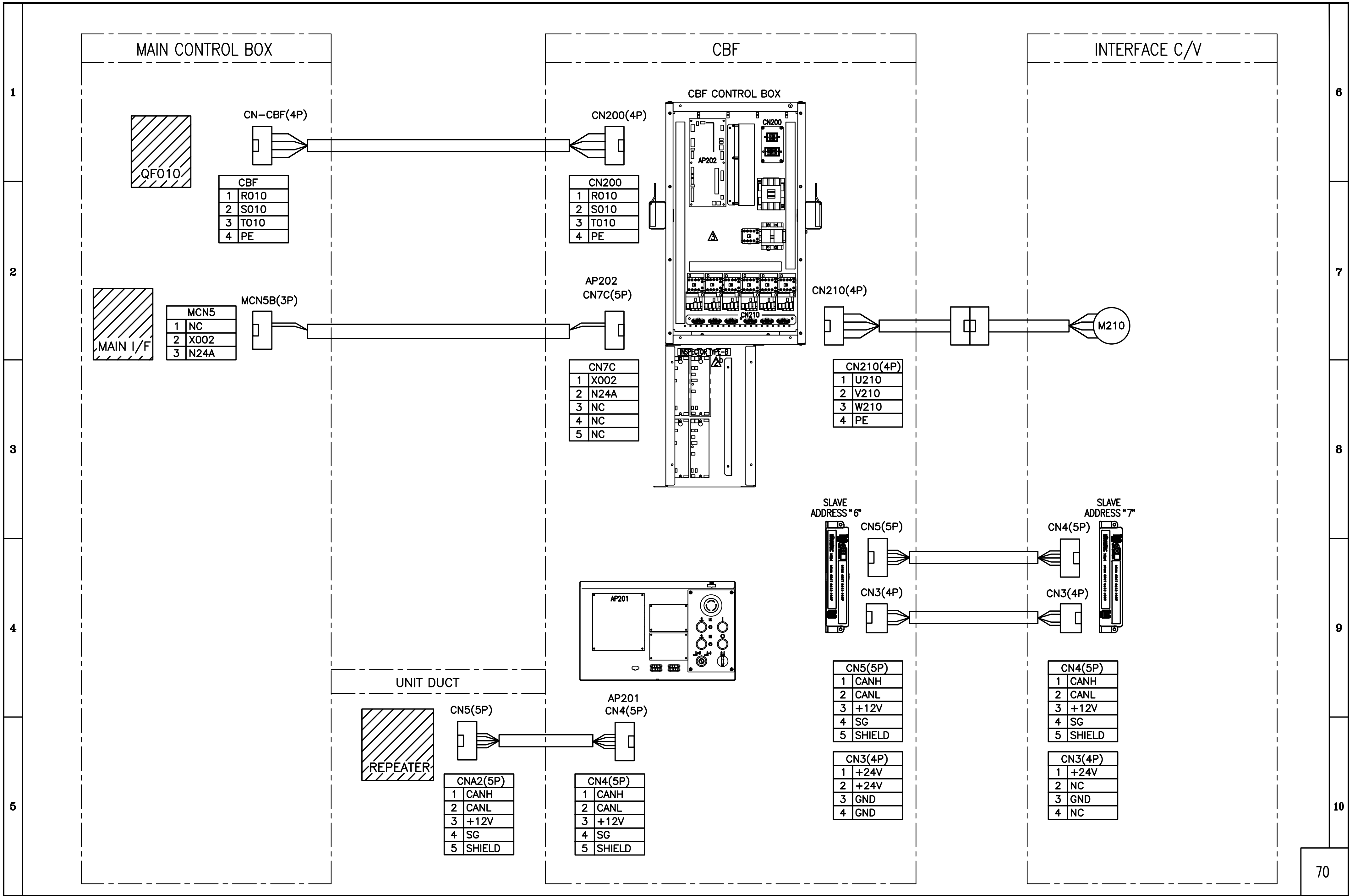

CN5C
CN6C
CN1C
CN2C
SW2
[FG][RT]
[GNDA]
CN5C
CN6C
CN1C
CN2C
[GND24]
[24V]
[12V]
SW1
[ADDRESS]
[5VA]
CN3C
JP1
△b
10~1F
0~F
JP1
[ADDSELECT]
[RUN]
[5V]
[GND]
9CF-N1100-5□□
CN4C
CN7C
muratec

## AP205/AP206/AP207/AP208(STEPPER DRIVER 9CF-N110A-5＊＊/6＊＊)

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | |
| 2 | a~b | 15-11-27 | | JP1追加 | F2 | 平野 | | ~ | | | | | |
| 1 | a~c | 12-11-29 | | INSPECTOR TYPE-B追加 | F1 | 宮脇 | | ~ | | | | | |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CF | 名称 NAME | CONSTRUCTION DIAGRAM<br>(STEPPER DRIVER) |
| 検図 CHECKED | 2015 -11 -27 | H.SHIMO | | | | |
| 設計 DESIGNED | 2012 -08 -18 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01C-F2 \| 202 |
| 製図 DRAWN | 2012 -08 -18 | K.HIRANO | サイズ SIZE | 2 | | muratec MURATA MACHINERY. LTD. |


MAIN CONTROL BOX
CBF
INTERFACE C/V
CBF CONTROL BOX
QF010
CN-CBF(4P)
CN200(4P)
CN200
AP202
MAIN I/F
MCN5B(3P)
AP202
CN7C(5P)
CN210
INSPECTOR TYPE-B
CN210(4P)
M210
SLAVE
ADDRESS "6"
SLAVE
ADDRESS "7"
CN5(5P)
CN4(5P)
CN3(4P)
CN3(4P)
AP201
UNIT DUCT
REPEATER
CN5(5P)
AP201
CN4(5P)
1
2
3
4
5
6
7
8
9
10

| CBF | |
|---|---|
| 1 | R010 |
| 2 | S010 |
| 3 | T010 |
| 4 | PE |

| CN200 | |
|---|---|
| 1 | R010 |
| 2 | S010 |
| 3 | T010 |
| 4 | PE |

| MCN5 | |
|---|---|
| 1 | NC |
| 2 | X002 |
| 3 | N24A |

| CN7C | |
|---|---|
| 1 | X002 |
| 2 | N24A |
| 3 | NC |
| 4 | NC |
| 5 | NC |

| CN210(4P) | |
|---|---|
| 1 | U210 |
| 2 | V210 |
| 3 | W210 |
| 4 | PE |

| CN5(5P) | |
|---|---|
| 1 | CANH |
| 2 | CANL |
| 3 | +12V |
| 4 | SG |
| 5 | SHIELD |

| CN3(4P) | |
|---|---|
| 1 | +24V |
| 2 | +24V |
| 3 | GND |
| 4 | GND |

| CN4(5P) | |
|---|---|
| 1 | CANH |
| 2 | CANL |
| 3 | +12V |
| 4 | SG |
| 5 | SHIELD |

| CN3(4P) | |
|---|---|
| 1 | +24V |
| 2 | NC |
| 3 | GND |
| 4 | NC |

| CNA2(5P) | |
|---|---|
| 1 | CANH |
| 2 | CANL |
| 3 | +12V |
| 4 | SG |
| 5 | SHIELD |

| CN4(5P) | |
|---|---|
| 1 | CANH |
| 2 | CANL |
| 3 | +12V |
| 4 | SG |
| 5 | SHIELD |

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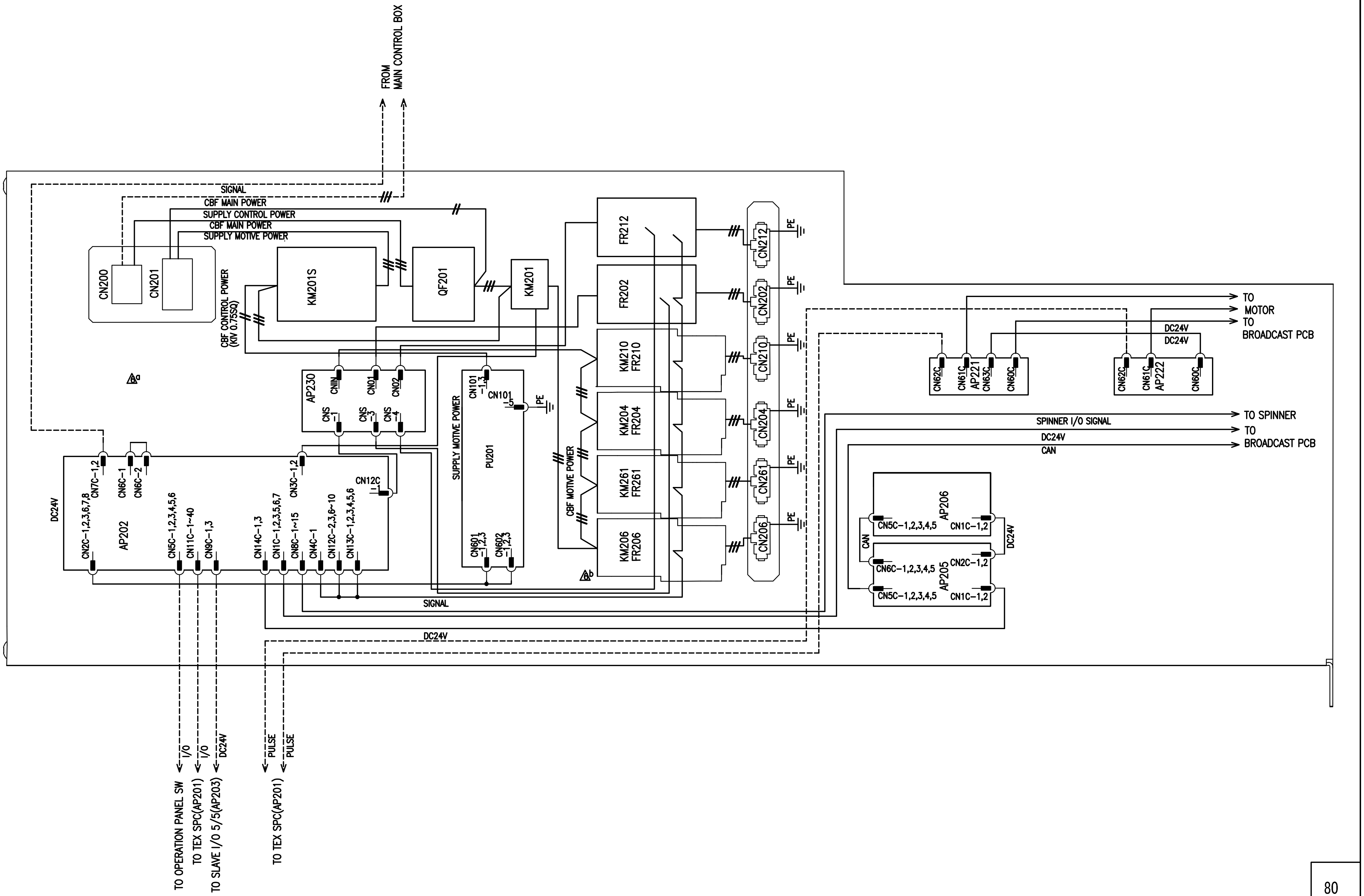
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 13-09-04 | | 新規CBF I/F基板対応 | 12 | 宮脇 | | ~ | | | | | |
| 2 | a~b | 12-11-30 | | INSPECTOR TYPE-B 追加 | 11 | 宮脇 | | ~ | | | | | |
| 1 | a~b | 12-05-25 | | 誤記修正 | 10 | 平野 | | ~ | | | | | |

備考
APPENDIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2013 -09 -04 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM<br>(MAIN-CBF-INTERFACE C/V) | |
| 設計 DESIGNED | 2012 -01 -18 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01D-12 | 203 |
| 製図 DRAWN | 2012 -01 -18 | M.YOSHIDA | サイズ SIZE | 2 | | Muratec MURATA MACHINERY. LTD. | |

A-CAD V3


FROM
MAIN CONTROL BOX
SIGNAL
CBF MAIN POWER
SUPPLY CONTROL POWER
CBF MAIN POWER
SUPPLY MOTIVE POWER
CN200
CN201
KM201S
QF201
KM201
FR212
FR202
KM210 FR210
KM204 FR204
KM261 FR261
KM206 FR206
CN212
CN202
CN210
CN204
CN261
CN206
PE
CBF CONTROL POWER (KIV 0.75SQ)
AP230
CNIN
CN01
CN02
CNS -1
CNS -3
CNS -4
CN101 -1,3
CN101 -5
SUPPLY MOTIVE POWER
PU201
CN601 -1,2,3
CN602 -1,2,3
CBF MOTIVE POWER
AP202
CN7C-1,2
CN6C-1
CN6C-2
CN3C-1,2
CN12C -1
DC24V
CN2C-1,2,3,6,7,8
CN5C-1,2,3,4,5,6
CN11C-1~40
CN9C-1,3
CN14C-1,3
CN1C-1,2,3,5,6,7
CN8C-1~15
CN4C-1
CN12C-2,3,6~10
CN13C-1,2,3,4,5,6
SIGNAL
DC24V
a
b
TO
MOTOR
TO
BROADCAST PCB
DC24V
DC24V
CN62C
CN61C
AP221
CN63C
CN60C
CN62C
CN61C
AP222
CN60C
SPINNER I/O SIGNAL
DC24V
CAN
TO SPINNER
TO
BROADCAST PCB
AP206
CN5C-1,2,3,4,5
CN1C-1,2
CAN
DC24V
CN6C-1,2,3,4,5
CN2C-1,2
AP205
CN5C-1,2,3,4,5
CN1C-1,2
I/O
I/O
DC24V
PULSE
PULSE
TO OPERATION PANEL SW
TO TEX SPC(AP201)
TO SLAVE I/O 5/5(AP203)
TO TEX SPC(AP201)

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| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~b | 13-12-13 | | 誤記修正 | 12 | 宮脇 | 6 | a~b | 18-10-25 | | リターンコンベア分割対応 | 15 | 福沢 | 備考<br>APPENDIX |
| 2 | ~ | 13-12-03 | | SW電源変更 | 11 | 宮脇 | 5 | a~b | 16-08-25 | | リターンコンベアINV対応 | 14 | 福沢 | |
| 1 | a~b | 13-11-26 | | 新規CBF I/F基板対応 | 11 | 宮脇 | 4 | a~g | 16-06-14 | | トップパンチ対応,TU基板対応 | 13 | 福沢 | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CF | 名称<br>NAME | WIRING DIAGRAM<br>(CONTROL BOX) | |
| 検図<br>CHECKED | 2018 - 10 - 25 | H.SHIMO | | | | | |
| 設計<br>DESIGNED | 2012 - 11 - 30 | Y.MIYAWAKI | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CF-QL04A-15 | 506 |
| 製図<br>DRAWN | 2012 - 11 - 30 | Y.MIYAWAKI | サイズ<br>SIZE | 2 | | | |

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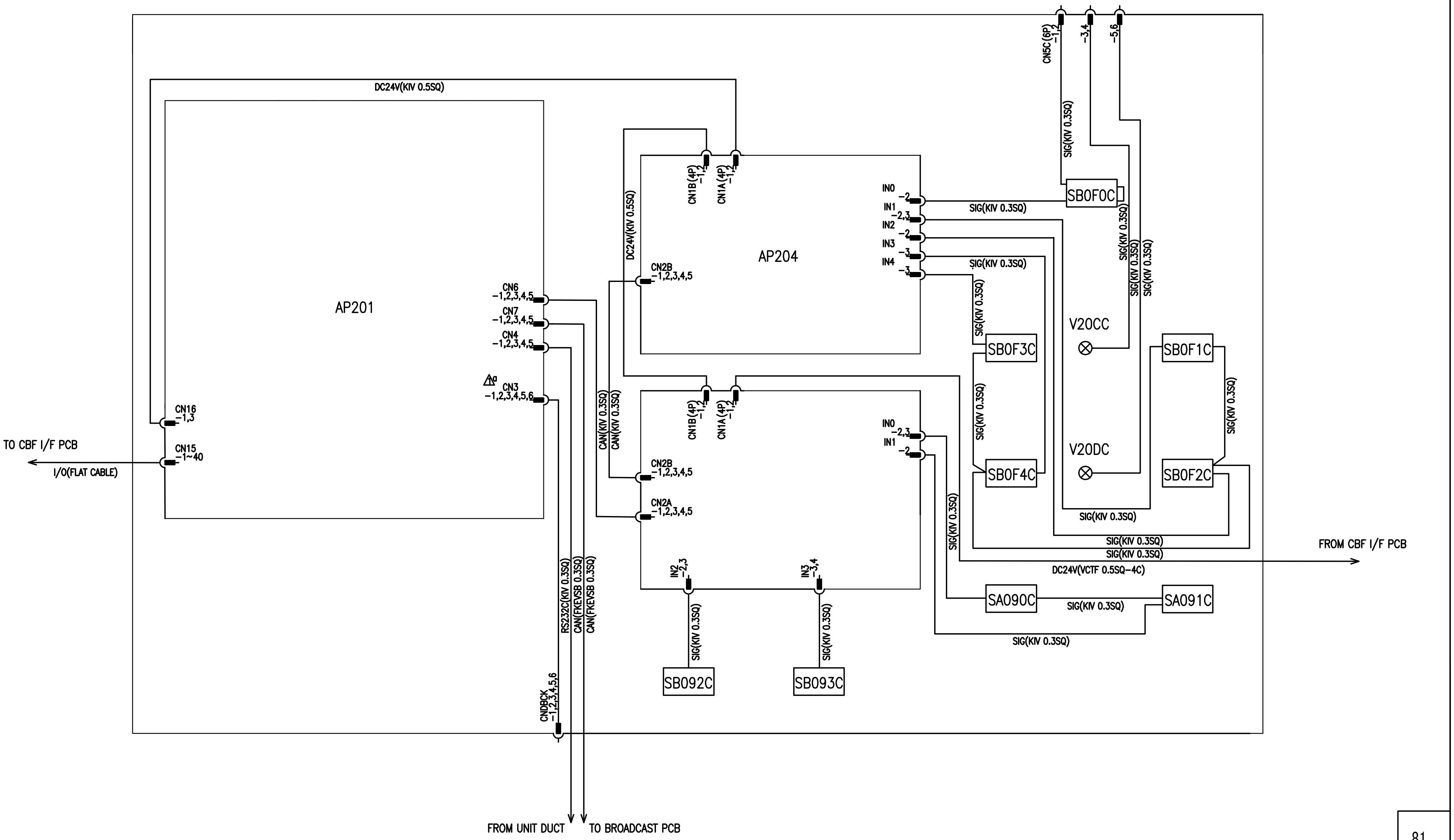
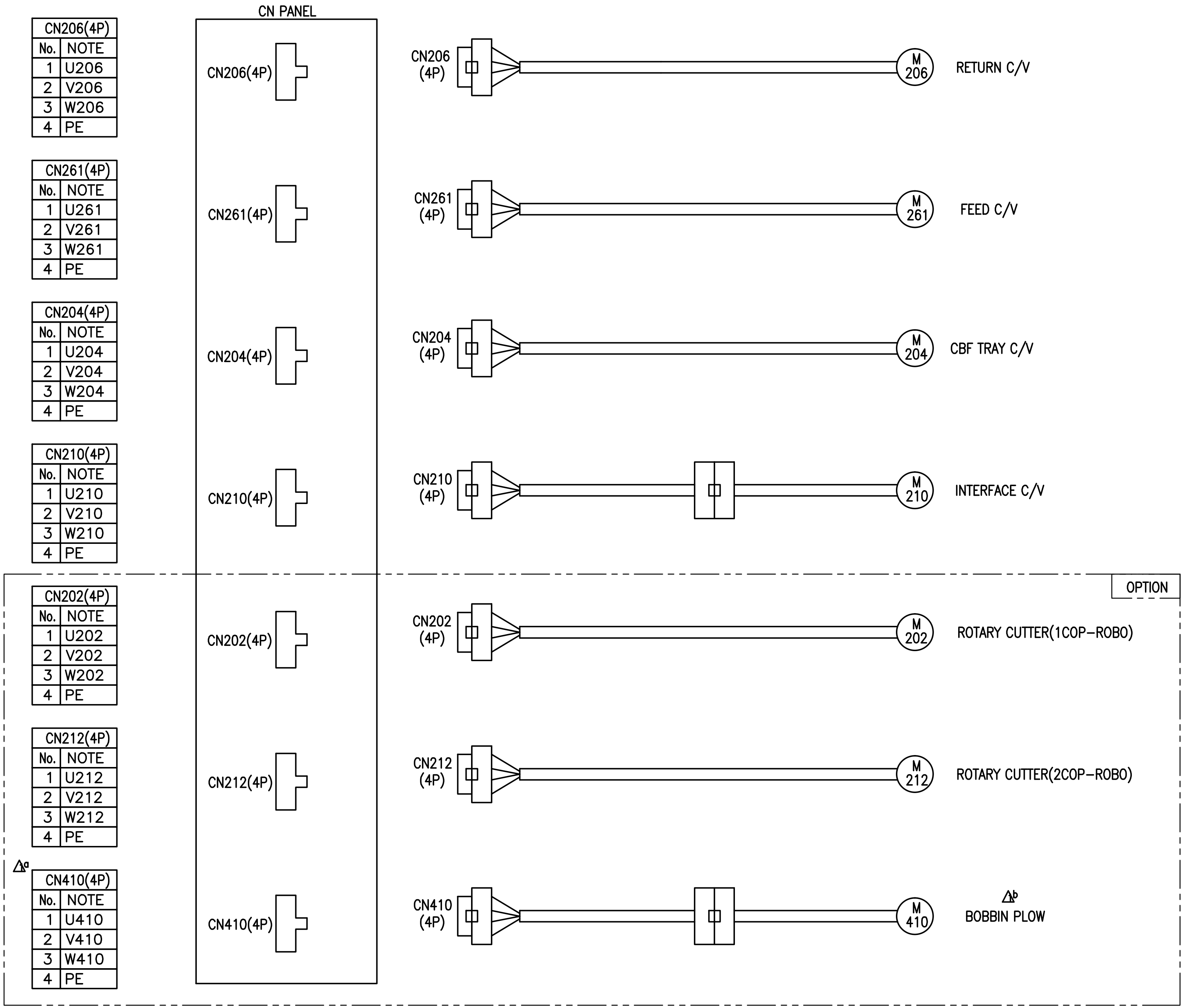

AP201
AP204
DC24V(KIV 0.5SQ)
CN16 -1,3
CN15 -1~40
TO CBF I/F PCB
I/O(FLAT CABLE)
CN6 -1,2,3,4,5
CN7 -1,2,3,4,5
CN4 -1,2,3,4,5
CN3 -1,2,3,4,5,6
△a
CN1B(4P) -1,2
CN1A(4P) -1,2
CN2B -1,2,3,4,5
CN2A -1,2,3,4,5
DC24V(KIV 0.5SQ)
CAN(KIV 0.3SQ)
CAN(KIV 0.3SQ)
IN0 -2
IN1 -2,3
IN2 -2
IN3 -3
IN4 -3
IN0 -2,3
IN1 -2
IN2 -2,3
IN3 -3,4
CN5C(6P) -1,2
-3,4
-5,6
SIG(KIV 0.3SQ)
SB0F0C
SB0F1C
SB0F2C
SB0F3C
SB0F4C
V20CC
V20DC
SA090C
SA091C
SB092C
SB093C
DC24V(VCTF 0.5SQ-4C)
FROM CBF I/F PCB
RS232C(KIV 0.3SQ)
CAN(FKEVSB 0.3SQ)
CAN(FKEVSB 0.3SQ)
CNDBCK -1,2,3,4,5,6
FROM UNIT DUCT
TO BROADCAST PCB

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | | |
| | ~ | | | | | | | ~ | | | | | | |
| △b | a~b | 16-10-24 | | 名称修正,誤記修正 | 20 | 福沢 | | ~ | | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | 備考 APPENDIX |

△b

| | | | | | | |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2016 -10 -24 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM<br>(OPERATION PANEL) |
| 設計 DESIGNED | 2012 -01 -18 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01A-20 001 |
| 製図 DRAWN | 2012 -01 -18 | K.HIRANO | サイズ SIZE | 2 | | Muratec MURATA MACHINERY, LTD. |

A-CAD V4


CN PANEL
CN206(4P)
CN261(4P)
CN204(4P)
CN210(4P)
CN202(4P)
CN212(4P)
CN410(4P)
CN206 (4P)
M 206
RETURN C/V
CN261 (4P)
M 261
FEED C/V
CN204 (4P)
M 204
CBF TRAY C/V
CN210 (4P)
M 210
INTERFACE C/V
OPTION
CN202 (4P)
M 202
ROTARY CUTTER(1COP-ROBO)
CN212 (4P)
M 212
ROTARY CUTTER(2COP-ROBO)
△a
CN410 (4P)
M 410
△b
BOBBIN PLOW

CN206(4P)

| No. | NOTE |
|---|---|
| 1 | U206 |
| 2 | V206 |
| 3 | W206 |
| 4 | PE |

CN261(4P)

| No. | NOTE |
|---|---|
| 1 | U261 |
| 2 | V261 |
| 3 | W261 |
| 4 | PE |

CN204(4P)

| No. | NOTE |
|---|---|
| 1 | U204 |
| 2 | V204 |
| 3 | W204 |
| 4 | PE |

CN210(4P)

| No. | NOTE |
|---|---|
| 1 | U210 |
| 2 | V210 |
| 3 | W210 |
| 4 | PE |

CN202(4P)

| No. | NOTE |
|---|---|
| 1 | U202 |
| 2 | V202 |
| 3 | W202 |
| 4 | PE |

CN212(4P)

| No. | NOTE |
|---|---|
| 1 | U212 |
| 2 | V212 |
| 3 | W212 |
| 4 | PE |

CN410(4P)

| No. | NOTE |
|---|---|
| 1 | U410 |
| 2 | V410 |
| 3 | W410 |
| 4 | PE |

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |
| △ | a~b | 18-10-25 |  | ボビンイジェクター追加 | 41 | 福沢 |  | ~ |  |  |  |  |  |

備考 APPENDIX

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| 検図 CHECKED | 2018-10-25 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM<br>(AC MOTOR) |
| 設計 DESIGNED | 2012-01-27 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL01A-41 |
| 製図 DRAWN | 2012-01-27 | K.HIRANO | サイズ SIZE | 2 |  | 101 |

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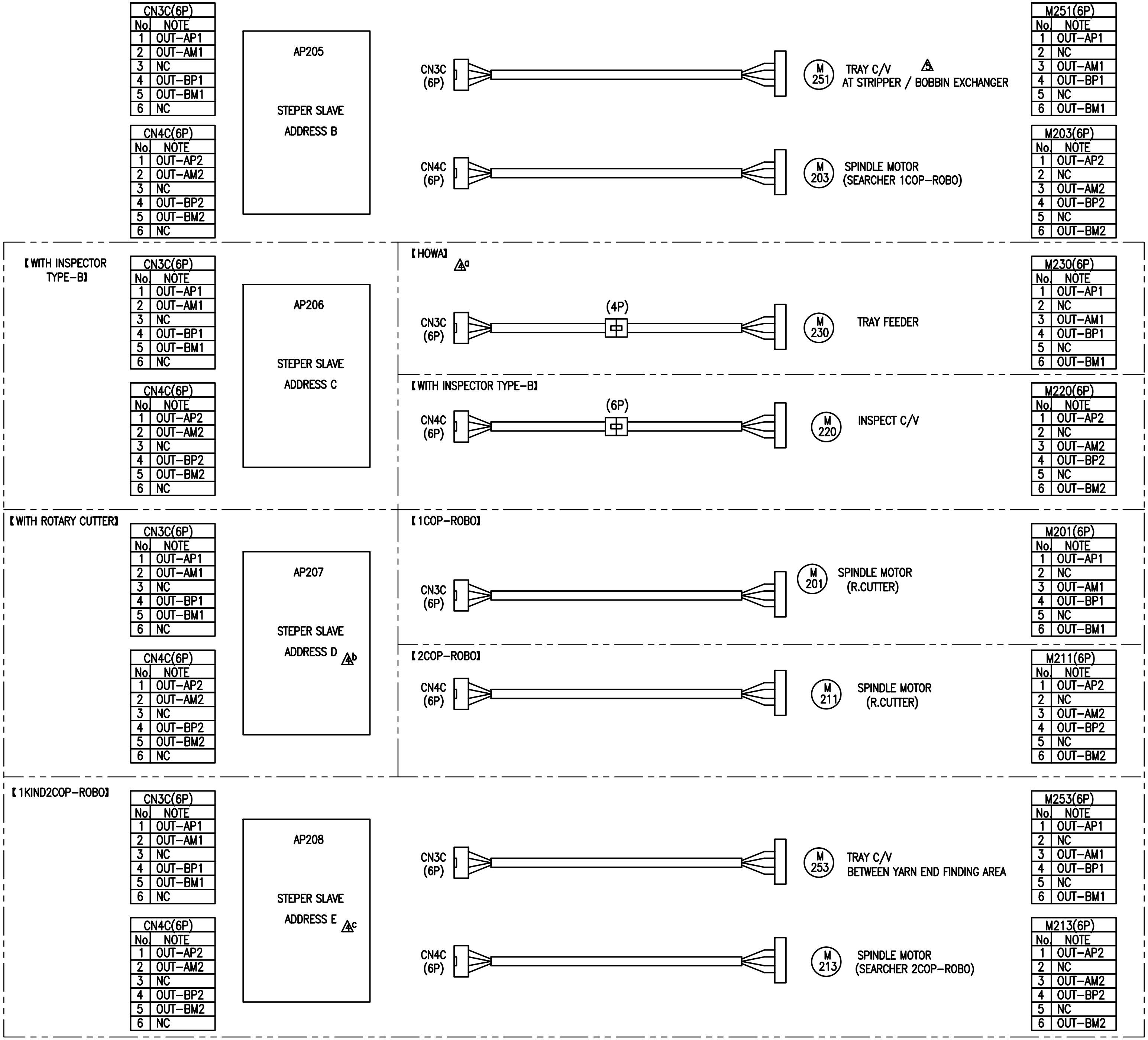
AP205
STEPER SLAVE
ADDRESS B
CN3C
(6P)
M
251
TRAY C/V
AT STRIPPER / BOBBIN EXCHANGER
5
CN4C
(6P)
M
203
SPINDLE MOTOR
(SEARCHER 1COP-ROBO)
【WITH INSPECTOR
TYPE-B】
AP206
STEPER SLAVE
ADDRESS C
【HOWA】
4a
CN3C
(6P)
(4P)
M
230
TRAY FEEDER
【WITH INSPECTOR TYPE-B】
CN4C
(6P)
(6P)
M
220
INSPECT C/V
【WITH ROTARY CUTTER】
AP207
STEPER SLAVE
ADDRESS D
4b
【1COP-ROBO】
CN3C
(6P)
M
201
SPINDLE MOTOR
(R.CUTTER)
【2COP-ROBO】
CN4C
(6P)
M
211
SPINDLE MOTOR
(R.CUTTER)
【1KIND2COP-ROBO】
AP208
STEPER SLAVE
ADDRESS E
4c
CN3C
(6P)
M
253
TRAY C/V
BETWEEN YARN END FINDING AREA
CN4C
(6P)
M
213
SPINDLE MOTOR
(SEARCHER 2COP-ROBO)

CN3C(6P) (AP205)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | OUT-AM1 |
| 3 | NC |
| 4 | OUT-BP1 |
| 5 | OUT-BM1 |
| 6 | NC |

CN4C(6P) (AP205)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | OUT-AM2 |
| 3 | NC |
| 4 | OUT-BP2 |
| 5 | OUT-BM2 |
| 6 | NC |

M251(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | NC |
| 3 | OUT-AM1 |
| 4 | OUT-BP1 |
| 5 | NC |
| 6 | OUT-BM1 |

M203(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | NC |
| 3 | OUT-AM2 |
| 4 | OUT-BP2 |
| 5 | NC |
| 6 | OUT-BM2 |

CN3C(6P) (AP206)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | OUT-AM1 |
| 3 | NC |
| 4 | OUT-BP1 |
| 5 | OUT-BM1 |
| 6 | NC |

CN4C(6P) (AP206)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | OUT-AM2 |
| 3 | NC |
| 4 | OUT-BP2 |
| 5 | OUT-BM2 |
| 6 | NC |

M230(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | NC |
| 3 | OUT-AM1 |
| 4 | OUT-BP1 |
| 5 | NC |
| 6 | OUT-BM1 |

M220(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | NC |
| 3 | OUT-AM2 |
| 4 | OUT-BP2 |
| 5 | NC |
| 6 | OUT-BM2 |

CN3C(6P) (AP207)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | OUT-AM1 |
| 3 | NC |
| 4 | OUT-BP1 |
| 5 | OUT-BM1 |
| 6 | NC |

CN4C(6P) (AP207)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | OUT-AM2 |
| 3 | NC |
| 4 | OUT-BP2 |
| 5 | OUT-BM2 |
| 6 | NC |

M201(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | NC |
| 3 | OUT-AM1 |
| 4 | OUT-BP1 |
| 5 | NC |
| 6 | OUT-BM1 |

M211(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | NC |
| 3 | OUT-AM2 |
| 4 | OUT-BP2 |
| 5 | NC |
| 6 | OUT-BM2 |

CN3C(6P) (AP208)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | OUT-AM1 |
| 3 | NC |
| 4 | OUT-BP1 |
| 5 | OUT-BM1 |
| 6 | NC |

CN4C(6P) (AP208)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | OUT-AM2 |
| 3 | NC |
| 4 | OUT-BP2 |
| 5 | OUT-BM2 |
| 6 | NC |

M253(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP1 |
| 2 | NC |
| 3 | OUT-AM1 |
| 4 | OUT-BP1 |
| 5 | NC |
| 6 | OUT-BM1 |

M213(6P)

| No | NOTE |
|---|---|
| 1 | OUT-AP2 |
| 2 | NC |
| 3 | OUT-AM2 |
| 4 | OUT-BP2 |
| 5 | NC |
| 6 | OUT-BM2 |

| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ~ | 12-12-17 | | 中継追加 | 53 | 宮脇 | | ~ | | | | | |
| 2 | ~ | 12-11-30 | | INSPECTOR TYPE-B追加 | 52 | 宮脇 | 5 | ~ | 18-10-05 | | ボビンエクスチェンジャー追記 | 54 | 福沢 |
| 1 | a~ l | 12-10-12 | | CBFステッパー対応 | 51 | 平野 | 4 | a~ c | 14-12-19 | | HOWA対応,誤記訂正 | 54 | 平野 |

備考 APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM<br>(STEPPING MOTOR) |
| 検図 CHECKED | 2018 - 10 - 05 | H.SHIMO | | | | |
| 設計 DESIGNED | 2012 - 01 - 27 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01A-54 / 405 |
| 製図 DRAWN | 2012 - 01 - 27 | K.HIRANO | サイズ SIZE | 2 | | |

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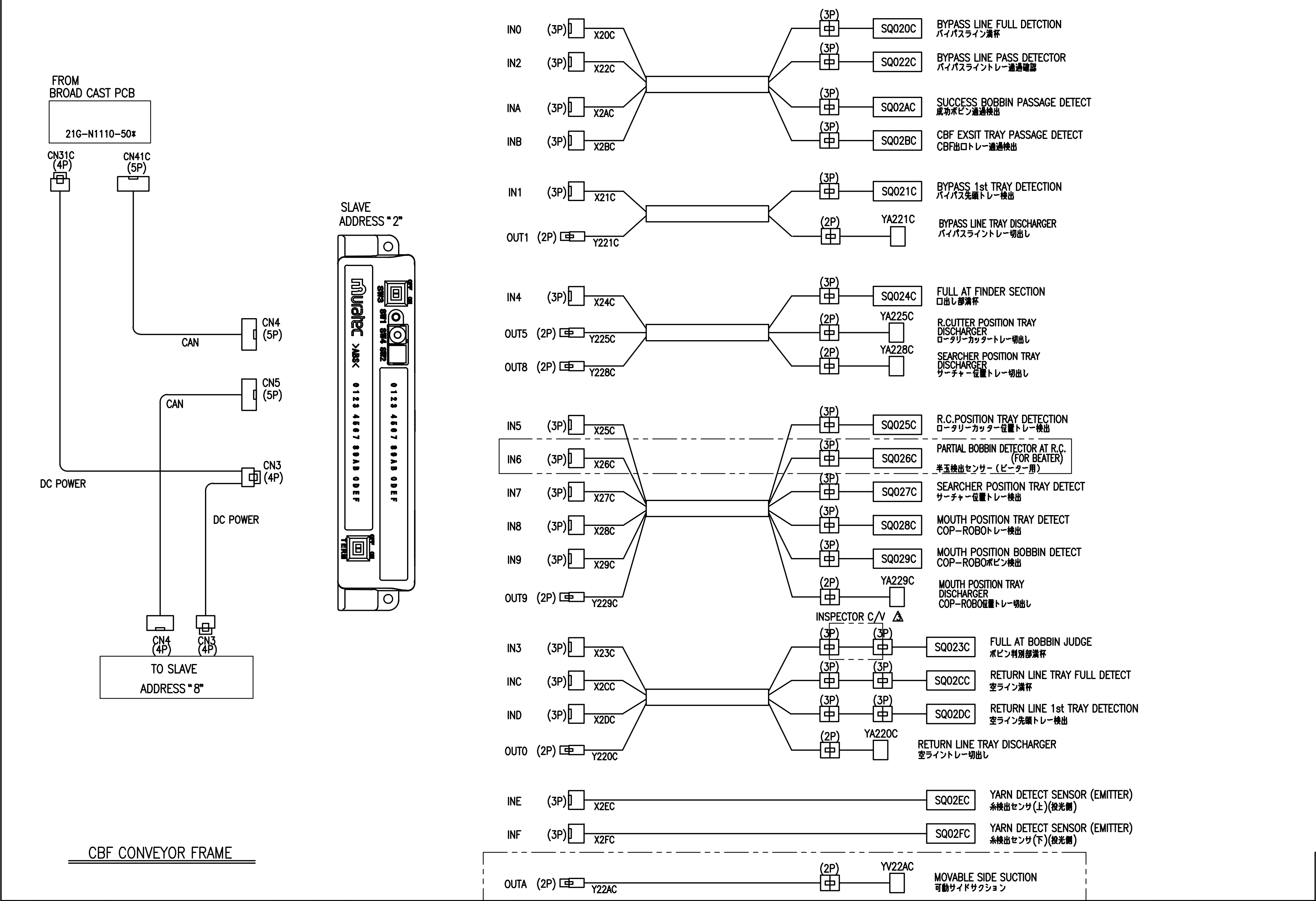
FROM
BROAD CAST PCB
21G-N1110-50*
CN31C
(4P)
CN41C
(5P)
CAN
CN4
(5P)
CN5
(5P)
CAN
DC POWER
CN3
(4P)
DC POWER
CN4
(4P)
CN3
(4P)
TO SLAVE
ADDRESS "8"
CBF CONVEYOR FRAME
SLAVE
ADDRESS "2"
muratec
>ABS<
SW3
SW1
SW4
SW2
TERM
0123 4567 89AB CDEF
0123 4567 89AB CDEF
IN0 (3P) X20C
IN2 (3P) X22C
INA (3P) X2AC
INB (3P) X2BC
(3P) SQ020C BYPASS LINE FULL DETCTION
バイパスライン満杯
(3P) SQ022C BYPASS LINE PASS DETECTOR
バイパスライントレー通過確認
(3P) SQ02AC SUCCESS BOBBIN PASSAGE DETECT
成功ボビン通過検出
(3P) SQ02BC CBF EXSIT TRAY PASSAGE DETECT
CBF出口トレー通過検出
IN1 (3P) X21C
OUT1 (2P) Y221C
(3P) SQ021C BYPASS 1st TRAY DETECTION
バイパス先頭トレー検出
(2P) YA221C BYPASS LINE TRAY DISCHARGER
バイパスライントレー切出し
IN4 (3P) X24C
OUT5 (2P) Y225C
OUT8 (2P) Y228C
(3P) SQ024C FULL AT FINDER SECTION
口出し部満杯
(2P) YA225C R.CUTTER POSITION TRAY DISCHARGER
ロータリーカッタートレー切出し
(2P) YA228C SEARCHER POSITION TRAY DISCHARGER
サーチャー位置トレー切出し
IN5 (3P) X25C
IN6 (3P) X26C
IN7 (3P) X27C
IN8 (3P) X28C
IN9 (3P) X29C
OUT9 (2P) Y229C
(3P) SQ025C R.C.POSITION TRAY DETECTION
ロータリーカッター位置トレー検出
(3P) SQ026C PARTIAL BOBBIN DETECTOR AT R.C. (FOR BEATER)
半玉検出センサー（ビーター用）
(3P) SQ027C SEARCHER POSITION TRAY DETECT
サーチャー位置トレー検出
(3P) SQ028C MOUTH POSITION TRAY DETECT
COP-ROBOトレー検出
(3P) SQ029C MOUTH POSITION BOBBIN DETECT
COP-ROBOボビン検出
(2P) YA229C MOUTH POSITION TRAY DISCHARGER
COP-ROBO位置トレー切出し
INSPECTOR C/V 3
IN3 (3P) X23C
INC (3P) X2CC
IND (3P) X2DC
OUT0 (2P) Y220C
(3P) (3P) SQ023C FULL AT BOBBIN JUDGE
ボビン判別部満杯
(3P) (3P) SQ02CC RETURN LINE TRAY FULL DETECT
空ライン満杯
(3P) (3P) SQ02DC RETURN LINE 1st TRAY DETECTION
空ライン先頭トレー検出
(2P) YA220C RETURN LINE TRAY DISCHARGER
空ライントレー切出し
INE (3P) X2EC
SQ02EC YARN DETECT SENSOR (EMITTER)
糸検出センサ(上)(投光側)
INF (3P) X2FC
SQ02FC YARN DETECT SENSOR (EMITTER)
糸検出センサ(下)(投光側)
OUTA (2P) Y22AC
(2P) YV22AC MOVABLE SIDE SUCTION
可動サイドサクション

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| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ～ | 18-11-15 | | インスペクターC/V対応 | 63 | 福沢 | | ～ | | | | | |
| 2 | ～ | 16-03-31 | | サイドサクション対応 | 62 | 平野 | | ～ | | | | | |
| 1 | ～ | 14-04-25 | | SQ02EC,SQ02FC追加 | 61 | 平野 | | ～ | | | | | |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CF | 名称<br>NAME | WIRING DIAGRAM<br>(SLAVE2) |
| 検図<br>CHECKED | 2018 - 11 - 15 | H.SHIMO | | | | |
| 設計<br>DESIGNED | 2012 - 01 - 27 | K.HIRANO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CF-QL01A-63 / 303 |
| 製図<br>DRAWN | 2012 - 01 - 27 | M.YOSHIDA | サイズ<br>SIZE | 2 | | |

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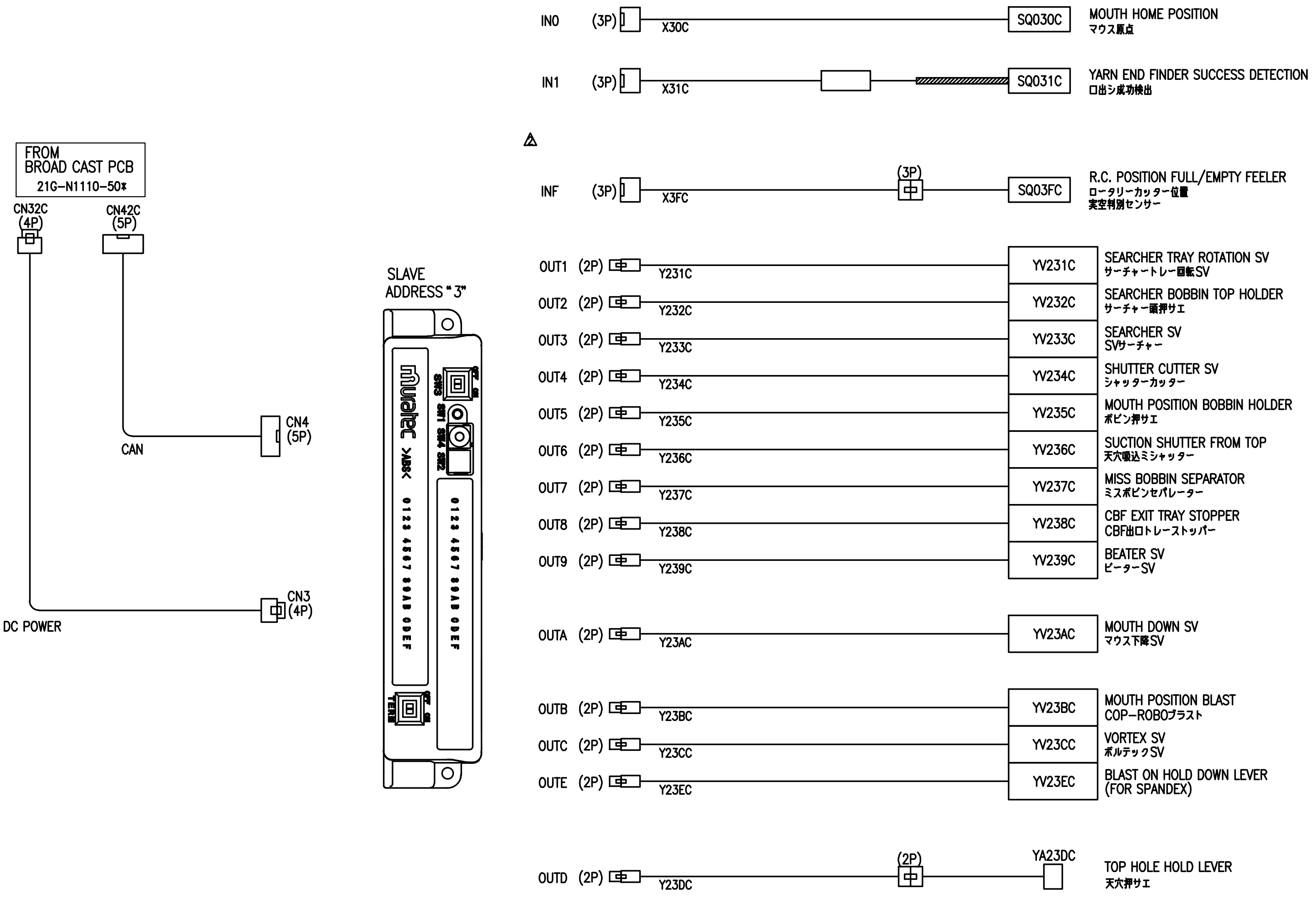
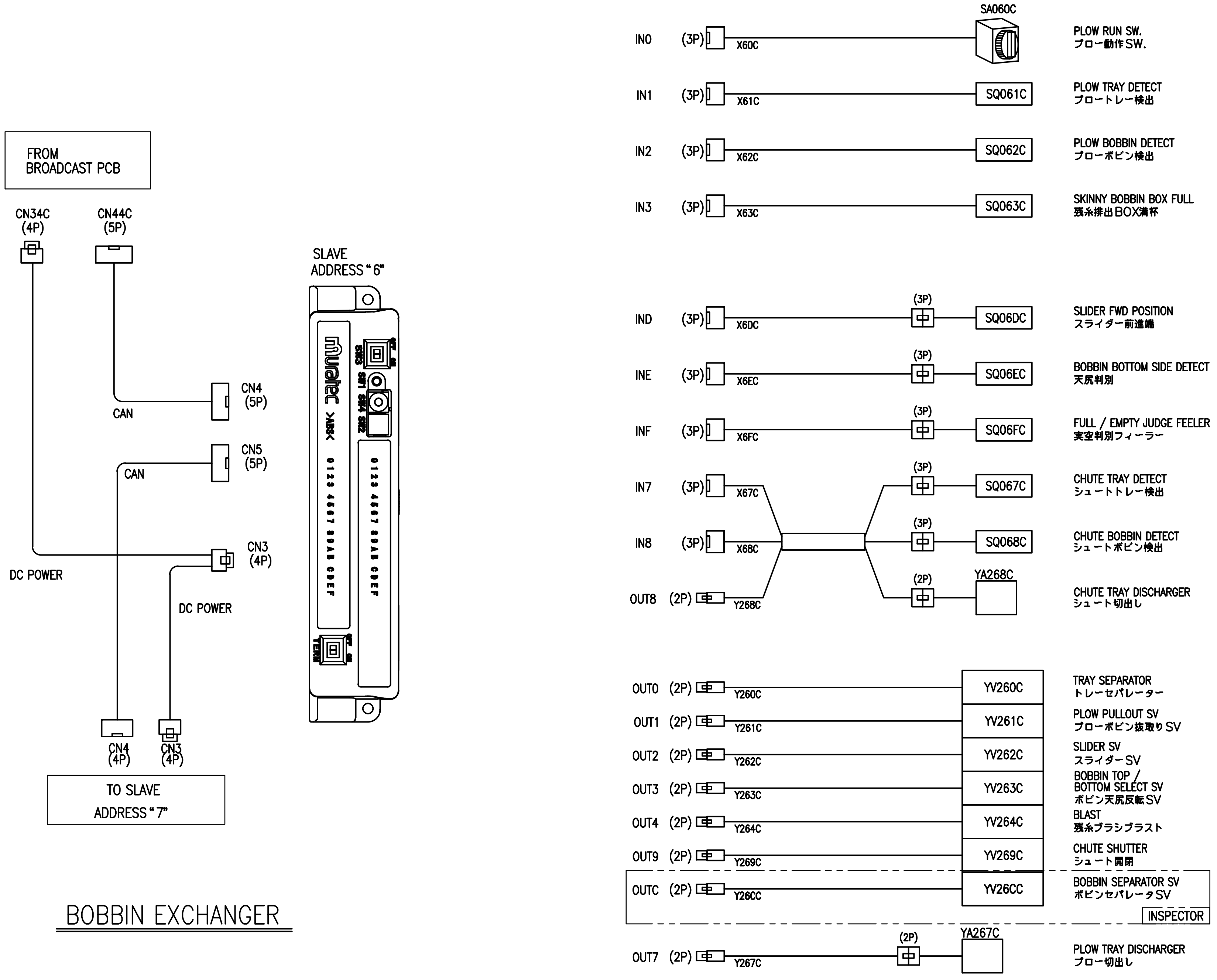

FROM
BROAD CAST PCB
21G-N1110-50*
CN32C
(4P)
CN42C
(5P)
CAN
CN4
(5P)
DC POWER
CN3
(4P)
SLAVE
ADDRESS "3"
muratec
SW3
SW1
SW4
SW2
>ABS<
0123 4567 89AB CDEF
TERM
IN0 (3P) X30C SQ030C MOUTH HOME POSITION
マウス原点
IN1 (3P) X31C SQ031C YARN END FINDER SUCCESS DETECTION
口出シ成功検出
2
INF (3P) X3FC (3P) SQ03FC R.C. POSITION FULL/EMPTY FEELER
ロータリーカッター位置
実空判別センサー
OUT1 (2P) Y231C YV231C SEARCHER TRAY ROTATION SV
サーチャートレー回転SV
OUT2 (2P) Y232C YV232C SEARCHER BOBBIN TOP HOLDER
サーチャー頭押サエ
OUT3 (2P) Y233C YV233C SEARCHER SV
SVサーチャー
OUT4 (2P) Y234C YV234C SHUTTER CUTTER SV
シャッターカッター
OUT5 (2P) Y235C YV235C MOUTH POSITION BOBBIN HOLDER
ボビン押サエ
OUT6 (2P) Y236C YV236C SUCTION SHUTTER FROM TOP
天穴吸込ミシャッター
OUT7 (2P) Y237C YV237C MISS BOBBIN SEPARATOR
ミスボビンセパレーター
OUT8 (2P) Y238C YV238C CBF EXIT TRAY STOPPER
CBF出口トレーストッパー
OUT9 (2P) Y239C YV239C BEATER SV
ビーターSV
OUTA (2P) Y23AC YV23AC MOUTH DOWN SV
マウス下降SV
OUTB (2P) Y23BC YV23BC MOUTH POSITION BLAST
COP-ROBOブラスト
OUTC (2P) Y23CC YV23CC VORTEX SV
ボルテックSV
OUTE (2P) Y23EC YV23EC BLAST ON HOLD DOWN LEVER
(FOR SPANDEX)
OUTD (2P) Y23DC (2P) YA23DC TOP HOLE HOLD LEVER
天穴押サエ

COP-ROBO

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~ | | | | | | | ~ | | | | | | 備考<br>APPENDIX |
| △2 | ~ | 17-06-06 | | 糸端検出(第2ステーション)削除 | 72 | 福沢 | | ~ | | | | | | |
| △1 | ~ | 16-04-02 | | サイドサクション対応 | 71 | 平野 | | ~ | | | | | | |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | サブNo | 署名 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種<br>MACHINE | 9CF | 名称<br>NAME | WIRING DIAGRAM<br>(SLAVE3) |
| 検図<br>CHECKED | 2017 -06 -06 | H.SHIMO | | | | |
| 設計<br>DESIGNED | 2012 -01 -27 | K.HIRANO | 尺度<br>SCALE | | 図番<br>DRW.NO | 9CF-QL01A-72 202 |
| 製図<br>DRAWN | 2012 -01 -27 | M.YOSHIDA | サイズ<br>SIZE | 2 | | muratec MURATA MACHINERY, LTD. |

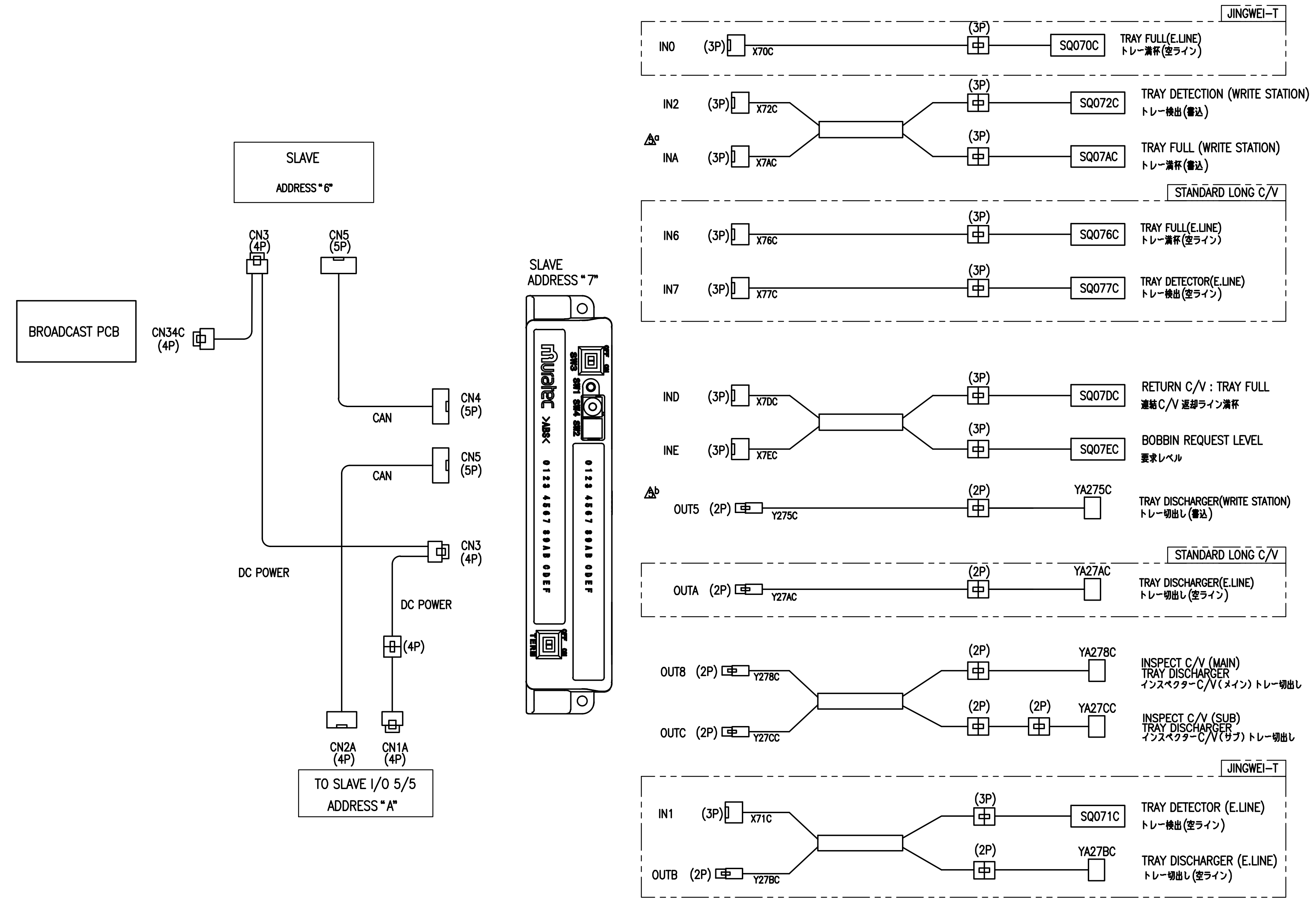
A-CAD V4


FROM
BROADCAST PCB
CN34C
(4P)
CN44C
(5P)
CN4
(5P)
CAN
CN5
(5P)
CAN
CN3
(4P)
DC POWER
DC POWER
CN4
(4P)
CN3
(4P)
TO SLAVE
ADDRESS "7"
SLAVE
ADDRESS "6"
muratec
SW3
SW1
SW4
SW2
0123 4567 89AB CDEF
0123 4567 89AB CDEF
TERM
BOBBIN EXCHANGER
SA060C
IN0 (3P) X60C
PLOW RUN SW.
プロー動作SW.
IN1 (3P) X61C
SQ061C
PLOW TRAY DETECT
プロートレー検出
IN2 (3P) X62C
SQ062C
PLOW BOBBIN DETECT
プローボビン検出
IN3 (3P) X63C
SQ063C
SKINNY BOBBIN BOX FULL
残糸排出BOX満杯
IND (3P) X6DC
(3P)
SQ06DC
SLIDER FWD POSITION
スライダー前進端
INE (3P) X6EC
(3P)
SQ06EC
BOBBIN BOTTOM SIDE DETECT
天尻判別
INF (3P) X6FC
(3P)
SQ06FC
FULL / EMPTY JUDGE FEELER
実空判別フィーラー
IN7 (3P) X67C
(3P)
SQ067C
CHUTE TRAY DETECT
シュートトレー検出
IN8 (3P) X68C
(3P)
SQ068C
CHUTE BOBBIN DETECT
シュートボビン検出
OUT8 (2P) Y268C
(2P)
YA268C
CHUTE TRAY DISCHARGER
シュート切出し
OUT0 (2P) Y260C
YV260C
TRAY SEPARATOR
トレーセパレーター
OUT1 (2P) Y261C
YV261C
PLOW PULLOUT SV
プローボビン抜取りSV
OUT2 (2P) Y262C
YV262C
SLIDER SV
スライダーSV
OUT3 (2P) Y263C
YV263C
BOBBIN TOP /
BOTTOM SELECT SV
ボビン天尻反転SV
OUT4 (2P) Y264C
YV264C
BLAST
残糸ブラシブラスト
OUT9 (2P) Y269C
YV269C
CHUTE SHUTTER
シュート開閉
OUTC (2P) Y26CC
YV26CC
BOBBIN SEPARATOR SV
ボビンセパレータSV
INSPECTOR
OUT7 (2P) Y267C
(2P)
YA267C
PLOW TRAY DISCHARGER
プロー切出し

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 備考 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |  |  | APPENDIX |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |  |  |  |
|  | ~ |  |  |  |  |  |  | ~ |  |  |  |  |  |  |  |  |  |
| △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂 正 事 項 | ｻﾌﾞNo | 署名 |  |  |  |  |

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  |  |  | 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM (SLAVE6) |
| 検図 CHECKED | 2018－10－10 | H.SHIMO | | | | |
| 設計 DESIGNED | 2018－10－10 | E.FUKUZAWA | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL02A-A0 | 000 |
| 製図 DRAWN | 2018－10－10 | M.YOSHIDA | サイズ SIZE | 2 | | |

muratec MURATA MACHINERY, LTD.

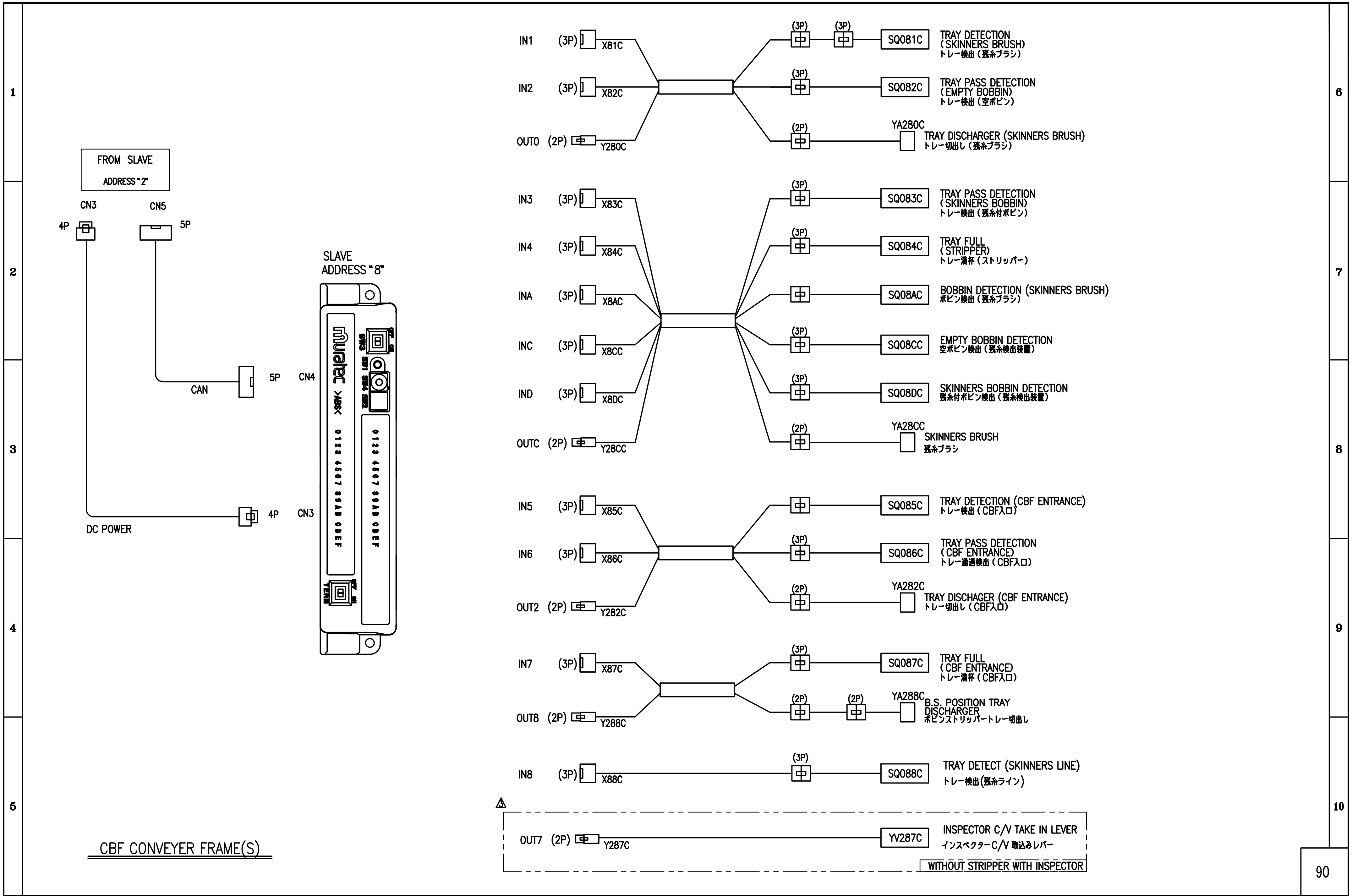

JINGWEI−T
IN0 (3P) X70C (3P) SQ070C
TRAY FULL(E.LINE)
トレー満杯(空ライン)
IN2 (3P) X72C (3P) SQ072C
TRAY DETECTION (WRITE STATION)
トレー検出(書込)
INA (3P) X7AC (3P) SQ07AC
TRAY FULL (WRITE STATION)
トレー満杯(書込)
a
STANDARD LONG C/V
IN6 (3P) X76C (3P) SQ076C
TRAY FULL(E.LINE)
トレー満杯(空ライン)
IN7 (3P) X77C (3P) SQ077C
TRAY DETECTOR(E.LINE)
トレー検出(空ライン)
SLAVE
ADDRESS "6"
CN3 (4P)
CN5 (5P)
BROADCAST PCB
CN34C (4P)
CAN
CN4 (5P)
CN5 (5P)
CAN
CN3 (4P)
DC POWER
DC POWER
(4P)
CN2A (4P)
CN1A (4P)
TO SLAVE I/O 5/5
ADDRESS "A"
SLAVE
ADDRESS "7"
muratec
SW3 SW1 SW4 SW2
0123 4567 89AB CDEF
TERM
IND (3P) X7DC (3P) SQ07DC
RETURN C/V : TRAY FULL
連結C/V 返却ライン満杯
INE (3P) X7EC (3P) SQ07EC
BOBBIN REQUEST LEVEL
要求レベル
b
OUT5 (2P) Y275C (2P) YA275C
TRAY DISCHARGER(WRITE STATION)
トレー切出し(書込)
STANDARD LONG C/V
OUTA (2P) Y27AC (2P) YA27AC
TRAY DISCHARGER(E.LINE)
トレー切出し(空ライン)
OUT8 (2P) Y278C (2P) YA278C
INSPECT C/V (MAIN)
TRAY DISCHARGER
インスペクターC/V(メイン)トレー切出し
OUTC (2P) Y27CC (2P) (2P) YA27CC
INSPECT C/V (SUB)
TRAY DISCHARGER
インスペクターC/V(サブ)トレー切出し
JINGWEI−T
IN1 (3P) X71C (3P) SQ071C
TRAY DETECTOR (E.LINE)
トレー検出(空ライン)
OUTB (2P) Y27BC (2P) YA27BC
TRAY DISCHARGER (E.LINE)
トレー切出し(空ライン)

# CONNECTION CONVEYOR

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | 備考 APPENDIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a～b | 14-10-31 | | 地上ロング対応 | B2 | 平野 | | ～ | | | | | | |
| 2 | ～ | 12-12-17 | | 中継追加 | B1 | 宮脇 | 5 | a～b | 18-10-10 | | インスペクター書込み停止対応 | B4 | 福沢 | |
| 1 | ～ | 12-12-07 | | 誤記修正 | B0 | 宮脇 | 4 | a～b | 17-12-11 | | JINGWEI−T仕様追加 | B3 | 福沢 | |

| | | |
|---|---|---|
| | | |
| 検図 CHECKED | 2018－10－10 | H.SHIMO |
| 設計 DESIGNED | 2012－11－30 | Y.MIYAWAKI |
| 製図 DRAWN | 2012－11－30 | Y.MIYAWAKI |

| | | | |
|---|---|---|---|
| 機種 MACHINE | 9CF | 名称 NAME | WIRING DIAGRAM<br>(SLAVE7) |
| 尺度 SCALE | | 図番 DRW.NO | 9CF−QL04A−B4 |
| サイズ SIZE | 2 | | 405 |


1
2
3
4
5
6
7
8
9
10
FROM SLAVE
ADDRESS"2"
CN3
CN5
4P
5P
CAN
5P
CN4
DC POWER
4P
CN3
SLAVE
ADDRESS"8"
muratec
SW3
SW1
SW4
SW2
TERM
0123 4567 89AB CDEF
0123 4567 89AB CDEF
IN1 (3P) X81C
IN2 (3P) X82C
OUT0 (2P) Y280C
(3P) (3P) SQ081C
TRAY DETECTION
(SKINNERS BRUSH)
トレー検出（残糸ブラシ）
(3P) SQ082C
TRAY PASS DETECTION
(EMPTY BOBBIN)
トレー検出（空ボビン）
(2P) YA280C
TRAY DISCHARGER (SKINNERS BRUSH)
トレー切出し（残糸ブラシ）
IN3 (3P) X83C
IN4 (3P) X84C
INA (3P) X8AC
INC (3P) X8CC
IND (3P) X8DC
OUTC (2P) Y28CC
(3P) SQ083C
TRAY PASS DETECTION
(SKINNERS BOBBIN)
トレー検出（残糸付ボビン）
(3P) SQ084C
TRAY FULL
(STRIPPER)
トレー満杯（ストリッパー）
SQ08AC
BOBBIN DETECTION (SKINNERS BRUSH)
ボビン検出（残糸ブラシ）
(3P) SQ08CC
EMPTY BOBBIN DETECTION
空ボビン検出（残糸検出装置）
(3P) SQ08DC
SKINNERS BOBBIN DETECTION
残糸付ボビン検出（残糸検出装置）
(2P) YA28CC
SKINNERS BRUSH
残糸ブラシ
IN5 (3P) X85C
IN6 (3P) X86C
OUT2 (2P) Y282C
SQ085C
TRAY DETECTION (CBF ENTRANCE)
トレー検出（CBF入口）
(3P) SQ086C
TRAY PASS DETECTION
(CBF ENTRANCE)
トレー通過検出（CBF入口）
(2P) YA282C
TRAY DISCHAGER (CBF ENTRANCE)
トレー切出し（CBF入口）
IN7 (3P) X87C
OUT8 (2P) Y288C
(3P) SQ087C
TRAY FULL
(CBF ENTRANCE)
トレー満杯（CBF入口）
(2P) (2P) YA288C
B.S. POSITION TRAY
DISCHARGER
ボビンストリッパートレー切出し
IN8 (3P) X88C
(3P) SQ088C
TRAY DETECT (SKINNERS LINE)
トレー検出(残糸ライン)
△3
OUT7 (2P) Y287C
YV287C
INSPECTOR C/V TAKE IN LEVER
インスペクターC/V 取込みレバー
WITHOUT STRIPPER WITH INSPECTOR
CBF CONVEYER FRAME(S)

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △3 | ~ | 14-04-01 |  | ストリッパー準備型+インスペクター対応 | C2 | 宮脇 |  | ~ |  |  |  |  |  |
| △2 | ~ | 12-12-07 |  | 誤記修正 | C1 | 宮脇 |  | ~ |  |  |  |  |  |
| △1 | ~ | 12-11-30 |  | ストリッパー準備型対応 | C1 | 平野 |  | ~ |  |  |  |  |  |

備考
APPENDIX

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
|  |  |  | MACHINE | 9CF | 名称<br>NAME | WIRING DIAGRAM<br>(SLAVE8) |  |
| CHECKED | 2014 -04 -01 | H.SHIMO |  |  |  |  |  |
| DESIGNED | 2012 -01 -27 | K.HIRANO | SCALE |  | DRW.NO | 9CF-QL01A-C2 | 203 |
| DRAWN | 2012 -01 -27 | M.YOSHIDA | SIZE | 2 |  | muratec MURATA MACHINERY, LTD. |  |

A-CAD V4

| Place | Factor | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| A | Relation Of Electric<br>電気関係 | DC Power Fail<br>DC電源アラーム | Can Communication Alarm<br>Can通信アラーム | PC-LINK ALARM<br>PCリンク異常 | Thermal Trip<br>サーマルトリップ (C/V) | Thermal Trip<br>サーマルトリップ<br>(Cop Robo-1) | Thermal Trip<br>サーマルトリップ<br>(Cop Robo-2) | REMOTE I/O OUTPUT ABNORMAL<br>リモートI/O出力異常 | Emergency Stop At CBF Panel<br>非常停止（CBFパネル） |
| b | Empty Line<br>空ライン | Tray Full At Empty Line<br>空ライントレー満杯 | Tray Jam At Empty Line<br>空ライントレー詰まり | | Tray Jam Aftter Empty Line Discherger<br>空ライン切り出し後詰まり | | | | |
| c | Bobbin Stripper<br>ストリッパー | Sensor Alarm At Stripper<br>ストリッパーセンサー異常 | Bobbin Pull Off<br>ボビン抜け | | | Cylinder Alarm<br>シリンダーアラーム | Discharge Miss<br>切り出しミス | Jam Aftter Stripper<br>ストリッパー以降詰まり | Jam Before Stripper<br>ストリッパー手前詰まり |
| △3a<br>d | Bobbin Ejector<br>ボビンイジェクター | Bobbin Removal Failure<br>ボビン抜きミス | Bobbin Jam Inside Ejector<br>ブロー内部ボビン詰まり | Tray Jam At Ejector<br>ブロー周辺トレー詰まり | | | | | |
| E | Yarn End Finder<br>口出し部 | Mouth Home position Off(1)<br>マウス原点外れ(1) | Bobbin Pull Off(1)<br>ボビン抜け(1) | Tray Jam At Cop Robo(1)<br>トレー詰まり(1) | Tray Jam Before Cop Robo(1)<br>コップロボ手前詰まり(1) | Mouth Home position Off(2)<br>マウス原点外れ(2) | Bobbin Pull Off(2)<br>ボビン抜け(2) | Tray Jam At Cop Robo(2)<br>トレー詰まり(2) | Tray Jam Before Cop Robo(2)<br>コップロボ手前詰まり(2) |
| F | Aftter Y.E.F.<br>口出し部以降 | Jam Exit Of CBF<br>CBF出口詰まり | Jam Back Of Unit<br>実ライン詰まり | | | | | | |
| G | By-Pass Line<br>バイパスライン | By-Pass Line Tray Full(1)<br>バイパスライン満杯(1) | By-Pass Line Continuous On(1)<br>バイパスライン連続ON(1) | | | By-Pass Line Tray Full(2)<br>バイパスライン満杯(2) | By-Pass Line Continuous On(2)<br>バイパスライン連続ON(2) | | |
| H | Connection C/V<br>連結C/V | Bad Tags Alarm Of Spin Inspector<br>スピンインスペクター<br>タグ不良アラーム | Relation Of Empty Line<br>空ライン関係 | Relation of Full Bobbin Line<br>実ライン関係 | | Yarn Waste Rmv Eqp Alarm<br>屑糸除去装置アラーム | Jam Buffer C/V Of Spin Inspector<br>S.I バッファーC/V<br>詰まり | Thermal Trip Of Buffer C/V<br>S.I バッファーC/V<br>サーマルトリップ | Sensor Alarm Of Spin Inspector<br>スピンインスペクター<br>センサーアラーム |
| △3b<br>J | Bobbin Chuter<br>ボビンシューター | Discharge Failure At Chute<br>シュート部トレー切出しミス | Bobbin Chute Failure<br>ボビンシュートミス | Bobbin Jam At Empty Bobbin Supply<br>空ボビン供給装置<br>ボビン詰まり | | | | | |
| U | Steam Setter<br>セッター | Steam Setter Alarm<br>セッタートラブル | | | | | | | |
| y | Spinner<br>精紡機 | Spinner Trouble<br>精紡機トラブル | Jam Entrance Of Spinner<br>精紡機前詰まり | | | | | | |

| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | a~b | 18-10-10 | | dアラーム,Jアラーム追加 | 11 | 福沢 | | ~ | | | | | |
| 2 | ~ | 15-01-30 | | H5アラーム追加 | 10 | 平野 | | ~ | | | | | |
| 1 | ~ | 13-03-06 | | アラーム追加 | 10 | 宮脇 | | ~ | | | | | |

備考
APPENDIX

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 機種 MACHINE | 9CF | 名称 NAME | DISPLAY DIAGRAM (TROUBLE DISPLAY SHEET) |
| 検図 CHECKED | 2018-10-10 | H.SHIMO | | | | |
| 設計 DESIGNED | 2012-05-21 | K.HIRANO | 尺度 SCALE | | 図番 DRW.NO | 9CF-QL01E-11 |
| 製図 DRAWN | 2012-05-21 | K.HIRANO | サイズ SIZE | 2 | | |

|  | MURATA → SPINNER |  |  | SPINNER → MURATA |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  | OUT | WIRE NO. | SIGNAL NAME | IN | WIRE NO. | SIGNAL NAME | IN | WIRE NO. | SIGNAL NAME |
| TOYOTA JINGWEI<br>(JAPAN) (CHINA)<br>BEST TONGHE<br>(CHINA) (CHINA) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) △3a |
|  |  |  |  | X001 | 3301A | ペッグドッフィング可能状態(READY FOR DOFFING) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) △3b |
|  |  |  |  | X002 | 3302A | 実ボビン1回排出(SPINNER SEND OUT) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  | X003 | 3303A | トラブル(TROUBLE) |  |  | △3c |
|  |  |  |  |  |  |  |  |  |  |
| RIETER<br>(SWISS) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X005 | 3305A | ドッフィング(DOFFING) |
|  |  |  |  | X001 | 3301A | トラブル(SERVO DISC REQUIRES NO TUBES) | X006 | 3306A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | サーボディスク 空排出位置(SERVO DISC READY) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| MARZOLI<br>(ITALY) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |
|  |  |  |  | X001 | 3301A | 実ボビン1個排出(SPINNER SEND OUT ONE TRAY) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | トラブル(TROUBLE) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  |  |  |  |  |  |  |
| ZINSER<br>(GERMANY) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |
|  | Y20B | BR3,BR4 | ワインダートラブル信号(TROUBLE SIG.) | X001 | 3301A | ペッグドッフィング可能状態(READY FOR DOFFING) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | トラブル(TROUBLE) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  |  |  |  |  |  |  |
| SUESSEN<br>(GERMANY) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X002 | 3302A | 実ボビン1個排出(SPINNER SEND OUT ONE TRAY) |
|  |  |  |  | X001 | 3301A | ドッフィング(DOFFING:SPINNING FRAME SENDS OUT ALL COPS) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  |  |  |  |  |  |  |
| HOWA<br>(JAPAN) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X003 | 3303A | 空ボビン金具検出(E.BOBBIN DETECTOR SIG.) |
|  |  |  |  | X001 | 3301A | ペッグシリンダー原点(PEG CYLINDER HOME POSITION) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  | X002 | 3302A | ペッグ払出シ完了(READY FOR DOFFING) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| LAKSHMI(LMW)<br>(INDIA)<br>△3a (PUSHER PEG<br>TRAY) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |
|  | Y20B | BR3,BR4 | ワインダートラブル信号(TROUBLE SIG.) | X001 | 3301A | 実ボビン1個排出(SPINNER SEND OUT ONE TRAY) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | トラブル(TROUBLE) | N1C | CN1 | コモン(COMMON) |
|  |  |  |  |  |  |  |  |  |  |
| △3b LAKSHMI(LMW)<br>(INDIA)<br>(TRANSFER BELT) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |
|  | Y20B | BR3,BR4 | ワインダートラブル信号(TROUBLE SIG.) | X001 | 3301A | ドッフィング(DOFFING) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | トラブル(TROUBLE) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| △3c JINGWEI<br>(CHINA)<br>(TRANSFER BELT) | Y20A | BR1,BR2 | 管糸要求信号(COP REQUEST SIG.) | X000 | 3300A | 管糸供給中(ON SERVICE SIG.) | X004 | 3304A | スピンドル運転中(ON WINDING SIG.) |
|  |  |  |  | X001 | 3301A | ドッフィング(DOFFING) | X005 | 3305A | 満管停止信号(ワイダー待ち時間)(FULL BOBBIN SIG.) |
|  |  |  |  | X002 | 3302A | 空排出位置(EMPTY POSITION) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

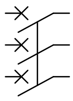
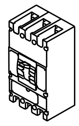
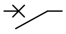
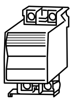
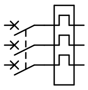
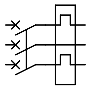
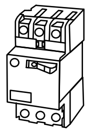
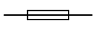
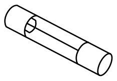
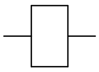
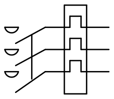
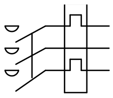
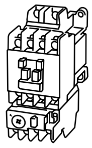
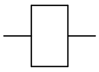
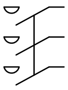
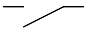
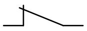
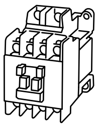
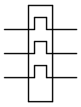
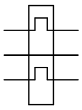
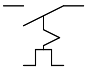
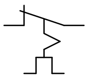
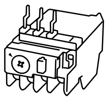
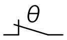
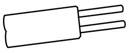
| △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 | △ | 箇所 | 年月日 | 変更連絡 | 訂正事項 | サブNo | 署名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △2 | a ~c<br>~ | 19-09-02 |  | LMW.JINGWEI<br>トランスファーベルト追加 | 22 | 福沢 | △3 | a ~c<br>~ | 19-11-15 |  | 特記削除（RX300新台は今後対応のため） | 22 | 福沢 |
| △1 | ~ | 17-12-11 |  | 信号追加 | 21 | 福沢 |  | ~ |  |  |  |  |  |

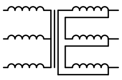
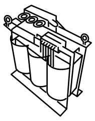
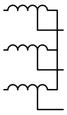
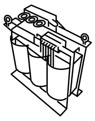
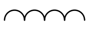
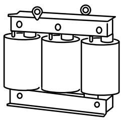
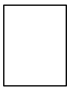
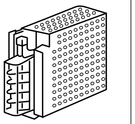
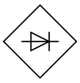
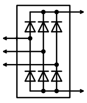
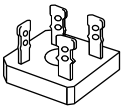
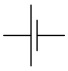
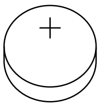
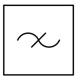
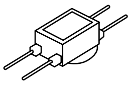
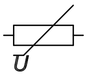
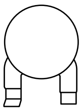
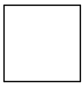
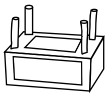
備考 APPENDIX

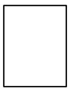
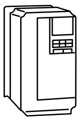
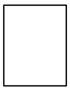
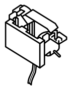
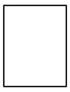
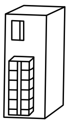
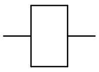
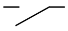
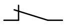
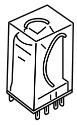
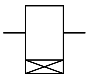
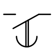
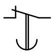
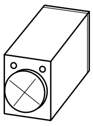
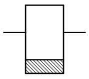
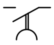
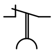
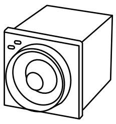
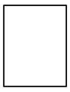
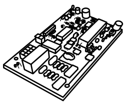
|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| 検図 CHECKED | 2019 - 11 - 15 | H.SHIMO | 機種 MACHINE | 9CF | 名称 NAME | DISPLAY DIAGRAM<br>(SPINNER SIGNAL SHEET) |  |
| 設計 DESIGNED | 2012 - 05 - 21 | K.HIRANO | 尺度 SCALE |  | 図番 DRW.NO | 9CF-QL01E-22 | 203 |
| 製図 DRAWN | 2012 - 05 - 21 | K.HIRANO | サイズ SIZE | 2 |  |  |  |

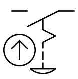
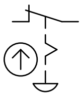
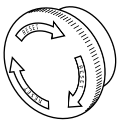
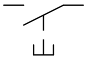
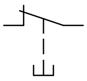
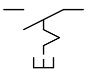
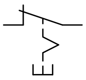
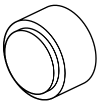
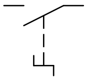
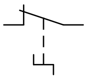
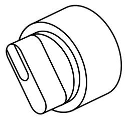
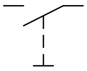
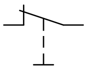
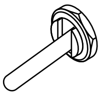
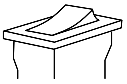
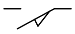
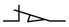
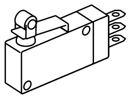
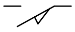
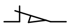
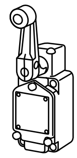
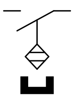
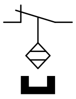
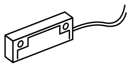
muratec MURATA MACHINERY, LTD.

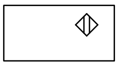
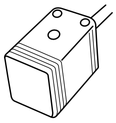
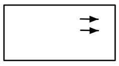
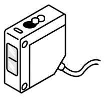
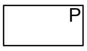
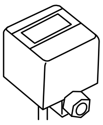
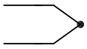
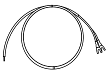
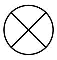
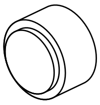
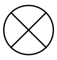
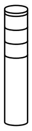
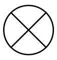
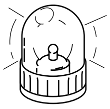
# Codes, Symbols and Explanations of Major Electric Components

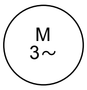
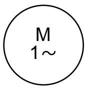
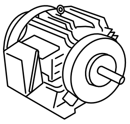
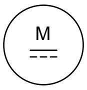
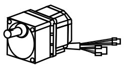
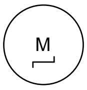
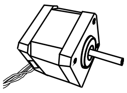
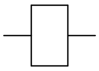
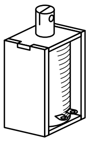
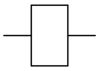
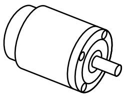
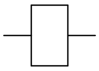
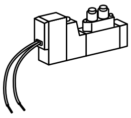
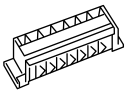
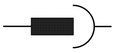
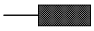
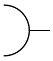
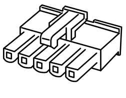
|  | Name | Code | Symbol (IEC) |  |  |  | Function |
|---|---|---|---|---|---|---|---|
| Protective equipment, switching equipment | **Circuit breaker** | QF |  |  |  |  | This is a breaker which protects a circuit from damage resulting from an overcurrent. The switch is opened (turned off) automatically when overcurrent passes through the circuit. The circuit breaker is a type of no-fuse switch.<br> |
|  | **Circuit protector** | QF |  |  |  |  | In principle there is no difference between a circuit breaker and a circuit protector. Circuit protectors are used for protection of "minimal capacity" control circuits, heaters, motors, solenoid valves, transformers, electronic circuits, etc. (which cannot be protected by breakers).<br> |
|  | **Motor breaker** | QF | 3 element<br> | 2 element<br> |  |  | This is a protective device which conforms to motor characteristics.<br> |
|  | **Glass tube fuse** | FU |  |  |  |  | Mainly used for protecting the components of a circuit from damage when overcurrent runs through the circuit.<br> |
|  | **Electromagnetic switching devices** | KM<br>FR | Coil<br> | (3 element)<br> | (2 element)<br> |  | Switching devices which are a combination of electromagnetic contactors which open and close electric circuits based on the operation of an electromagnet and thermal relays which interrupt electrical circuits based on electrical overloads, etc. Refer to thermal relay for thermal relay contactors.<br> |
|  | **Electromagnetic contactor** | KM | Coil<br> |  | a-contacts<br> | b-contacts<br> | This is a device which has several sets of breaker type switches for opening and closing moving contacts. This is used for a switch (ON/OFF) of motor circuit, etc.<br> |
|  | **Thermal relay** | FR | Thermal<br>(3 element)<br> | Thermal<br>(2 element)<br> | a-contacts<br>*1<br> | b-contacts<br>*2<br> | A device consisting of a heater and a thermal switch. It becomes hot when overcurrent flows through the heater circuit, thereby opening the contact.<br> |
|  | **Thermal switch (Thermoswitch)** | ST |  |  |  |  | This switch closes the moving contact in response to thermal conditions when the ambient temperature exceeds a specified point. (It is generally installed to a motor.)<br> |

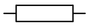
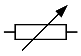
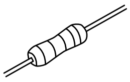
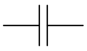
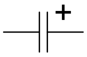
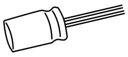
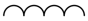
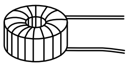
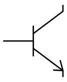
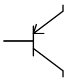
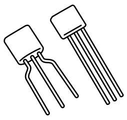
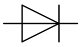
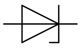
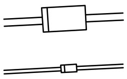
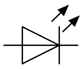
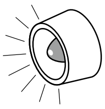
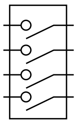
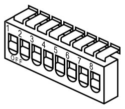
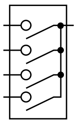
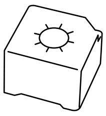
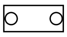
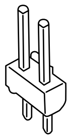
| | Name | Code | Symbol (IEC) | | | | Function |
|---|---|---|---|---|---|---|---|
| Power supply devices | **Insulating transformer** | T | Star delta<br> | | | | Device which raises or lowers AC voltage using electromagnetic induction. This is a type where both the primary wiring and secondary wiring are insulated.<br> |
| | **Auto transformer** | T |  | | | | Device which raises or lowers AC voltage using electromagnetic induction. This is a type where part of the primary wiring and secondary wiring are shared. For this reason, there is no insulation between the primary wiring and secondary wiring. Further, because the coils are shared, the device can be made small form and lightweight.<br> |
| | **Reactor** | L |  | | | | Coil installed on the inverter circuit. This has effects on power factor improvement and harmonic control.<br> |
| | **Constant voltage power supply** | PU |  | | | | A power supply which stays constant without being affected by voltage output load fluctuations.<br> |
| | **Rectifier** | VC | Single phase<br> | 3 phase<br> | | | Items which are created to transform AC (alternating current) to DC (direct current).<br>Composed of diodes and other rectifiers.<br> |
| | **Battery** | GB |  | | | | Device which outputs electrical energy by creating potential difference between electrodes through chemical reactions, etc.<br> |
| | **Noise filter** | Z | *3<br> | | | | Electrical circuits, electronic circuits, devices etc. for removing noise.<br> |
| | **Surge killer** | R | *4<br> | | | | Used to protect against surges caused by lightning, electrostatic discharges, switching, etc., and other transitional excessive voltage.<br> |
| | **Surge absorber** | Z |  | | | | A circuit or device for absorbing surge voltage.<br> |

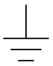
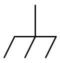
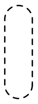
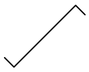
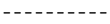
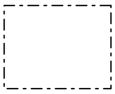
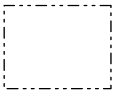
| | Name | Code | Symbol (IEC) | | | | Function |
|---|---|---|---|---|---|---|---|
| Power supply devices | **Inverter** | INV |  | | | | Device which controls motor RPM by changing motor power supply frequency.<br> |
| | **Under voltage trip device** | UVT |  | | | | Device which automatically trips the breaker when the voltage drops.<br> |
| | **Momentary power failure detection device** | PFD |  | | | | Device which detects momentary outages.<br> |
| Control devices | **Relay** | KA | Coil<br> | a-contacts<br> | b-contacts<br> | | Used for making or breaking one or more connections in electric circuits. While there are switches used for opening and closing circuits manually, relays serve to make and break contacts by means of electrical signals (voltages and currents). Electromagnetic relays are a typical example of relays. These relays use an electromagnet for contact activation.<br> |
| | **Timer relay (ON delay)** | KT | Coil<br> | a-contacts<br> | b-contacts<br> | | Relay which operates the contact point after the set time is exceeded when the coil turns ON. Also operates instantly when it turns OFF.<br> |
| | **Timer relay (OFF delay)** | KT | Coil<br> | a-contacts<br> | b-contacts<br> | | Relay which operates the contact point after the set time is exceeded when the coil turns OFF. Also operates instantly when it turns ON.<br> |
| | **Printed circuit board (PCB)** | AP |  | | | | Since the back of a PCB is printed with an electrically conductive pattern, multiple electronic components (elements such as diodes, transistors, etc.) are mounted and connected without conventional wiring.<br> |

| | Name | Code | Symbol (IEC) | | | | Function |
|---|---|---|---|---|---|---|---|
| | | | Momentary type | | Alternate type | | |
| | | | a-contacts | b-contacts | a-contacts | b-contacts | |
| Operation switches | **Emergency stop switch** | SB | | |  |  | In case of emergency during operation, press this switch by hand to stop the machine immediately. When the machine has been stopped by means of the emergency switch, the machine cannot be restarted until the switch knob is turned or pulled forward.  |
| | **Push button switch** | SB |  |  | *5  | *6  | Holding down this switch opens or closes the moving contact. Push button switches fall into two types: some will return to the open position when the operator's hand is removed from the switch (momentary type); some will remain at the closed position even when the operator's hand is removed. To release a switch of the latter type, it is necessary to press it once again.  |
| | **Selector switch** | SA | | |  |  | Turn the selector switch knob for making connections to a specific circuit or for selecting a pattern of closed contacts. Selector switches fall into two types: some will remain at the set position even when the operator's hand is removed; some will return to the home position automatically when the operator's hand is removed.  |
| | **Toggle switch**<br>**Rocker switch** | SA | | | *7  | *8  | Moving the lever upward or downward (or to the right or left) by hand changes the ON/ OFF setting of the power as well as the circuit. Two types of toggle switches are available: toggle switches whose lever can be set at a specific position; and toggle switches whose lever will return to the home position automatically after it has been moved to the other position.   |
| | **Microswitch** | SQ |  |  | | | This is a small-size switch which is activated when external mechanical force moves the moving contact.  |
| | **Limit switch** | SQ |  |  | | | This is a large-size switch which is activated when external mechanical force moves the moving contact.<br>The limit switch is designed to open, close, or change the circuit when the controlled system reaches the limit of its operating range.  |
| | **Reed switch** | SQ |  |  | | | Consists of a glass tube filled with an inert gas and contacts sealed inside the tube. The reed switch has no mechanically moving parts, operating when the presence of objects (magnetic substances) is detected as the objects approach the switch.<br>It is defined as a small-size proximity switch.  |

|  | Name | Code | Symbol (IEC) |  |  |  | Function |
|---|---|---|---|---|---|---|---|
| Sensors | **Proximity sensor** | SQ |  |  |  |  | Sensor which has no mechanical moving parts, and can operate by detecting if the object comes close to the sensor without actually contacting it. There is a type which detects if metal comes nearby and a type which uses changes in capacitance for detection of even non-metals.  |
|  | **Photoelectric sensor** | SQ |  |  |  |  | Sensor which operates when it detects an interruption of or receives projected light.  |
|  | **Pressure sensor** | SP | *9  |  |  |  | Sensor which converts and outputs changes in pressure of gases or liquids as electrical signals via a pressure element.  |
|  | **Thermocouple** | B |  |  |  |  | A sensor for measuring heat.  |
| Indication devices | **Indication lamp** | HL |  |  |  |  | Display which shows machine operation status, etc.  |
|  | **Signal tower** | HL |  |  |  |  | The signal tower consists of several lamps in tiers, conveying information including the operating status of the machine. It is placed in a easy-to-see place (at the end or top of the machine). This enables the operators and personnel in charge of maintenance to take necessary actions immediately.  |
|  | **Rotating light** | HL |  |  |  |  | This is an internal lamp which lights and rotates when the power is turned on. It is mainly used for informing the operators and personnel in charge of maintenance of the occurrence of a machine trouble, etc.  |

| | Name | Code | Symbol (IEC) | | | | Function |
|---|---|---|---|---|---|---|---|
| Power devices | **Induction motor** | M | 3 phase<br>*10<br> | Single phase<br>*11<br> | | | A coil-wound steel core is magnetized (attracts metal substances nearby) when an electric current flows through the coil. The induction motor produces linear motion using this principle. (Electromagnetic induction motor)<br> |
| | **DC motor** | M |  | | | | A motor which operates on direct current.<br> |
| | **Stepping motor** | M |  | | | | A synchronous motor which synchronizes with pulse power.<br> |
| | **Solenoid** | YA |  | | | | A coil which is created to attract magnetic substances is referred to as a solenoid (electromagnet). The solenoid produces linear motion.<br> |
| | **Rotary solenoid** | YA |  | | | | While the solenoid produces linear motion, the rotary solenoid produces rotary motion.<br> |
| | **Solenoid valve** | YV |  | | | | A valve that is opened and closed by means of a solenoid (electromagnet). The valve is opened when the coil is energized by flowing current through it. When it is de-energized by stopping the flow of current, the valve is pressed against the valve seat by the force of gravity, fluid pressure, or spring, thereby closing the flow path.<br> |
| Wiring devices | **Terminal block** | XT | | | | | Small block for wiring connection<br> |
| | **Connector** | X<br>CN | Socket plug<br> | Plug<br> | Socket<br> | | Device for connecting electrical wires to other electrical wires or electrical devices. Made up of a plug with protruding pins and a socket which receives the pins.<br> |

| | Name | Code | Symbol (IEC) | | | | Function |
|---|---|---|---|---|---|---|---|
| Electronic circuit parts | **Resistor** | R | Fixed resistor<br> | Variable resistor<br> | | | Every object offers, more or less, opposition to the flow of electric current. A device which uses this property to limit current flow is called a resistor.<br> |
| | **Condenser** | C | Standard condenser (non polar)<br> | Electrolytic condenser (polar)<br> | | | A device having two parallel metal plates, storing electrical energy between them.<br> |
| | **Coil** | L |  | | | | Electrical wires wound in a spiral coil. Works to maintain a constant current.<br> |
| | **Transistor** | V | NPN<br> | PNP<br> | | | Semiconductor device which has a current amplification function.<br> |
| | **Diode** | V | Standard diode<br> | Zener diode<br> | | | A semiconductor device designed to limit the flow of current to only one direction; from (+) to (-).<br> |
| | **Light emitting diode** | V |  | | | | Light device composed of a complex semiconductor which emits light. LED is small in size, sturdy and has a long operational life.<br> |
| | **DIP switch** | SA |  | | | | A small switch mounted on a printed circuit board. Set the individual sliding parts of the DIP switch to ON or OFF, when necessary.<br> |
| | **DIP rotary switch** | SA |  | | | | A small switch mounted on a printed circuit board. Binary or BCD codes can be set through connection with stamped numbers.<br> |
| | **Jumper** | JP |  | | | | Terminal for short circuits.<br> |

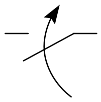
|  | Name | Code | Symbol (IEC) |  |  |  | Function |
|---|---|---|---|---|---|---|---|
| Earth, shields, etc. | **Earth** | PE |  |  |  |  | Connects wireways, devices, etc. to the Earth for safety. |
|  | **Ground** | GND |  |  |  |  | Standard potential in an electical circuit. |
|  | **Shield** | --- |  |  |  |  | A shield which reduces permeation of electromagnetic fields. |
|  | **Twisted pair** | --- |  |  |  |  | A method of twisting electrical wires to reduce noise effects. |
| Line types | **Dashed line** | --- |  |  |  |  | Indicates device links. |
|  | **Alternating long and short dashes** | --- |  |  |  |  | Indicates boundaries when drawing a portion of boards, equipment, etc. |
|  | **Alternating single long and double short dashes** | --- |  |  |  |  | Indicates specification divisions and options. |

IEC symbols are composed of the following content.

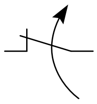
- **Contact indicator direction**

The clockwise rotation direction when operated.
a-contacts and b-contacts are as follows.

a-contacts
(Normally open contact)

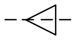
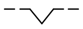


b-contacts
(Normally closed contact)



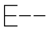
- **Function symbols**

The following functions are given to connecting parts.

|  |  |
|---|---|
| Connection function | |
| Interruption function | |
| Spring restoration function |  *12 |
| Residual function |  *13 |
| Delay function | |

- **Operational symbols**

The following functions are given to operation parts.

|  |  |
|---|---|
| Push operation |  |
| Pull operation | |
| Twist operation | |